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BRITISH MEDICAL JOURNAL

# Derbyshire County Council.

SUMMARY

OF THE

## ANNUAL REPORTS

OF THE

## MEDICAL OFFICERS OF HEALTH

### FOR THE YEAR 1893.

*WITH STATISTICAL AND OTHER RECORDS*

BY

SIDNEY BARWISE, M.D., LOND.,

County Medical Officer.

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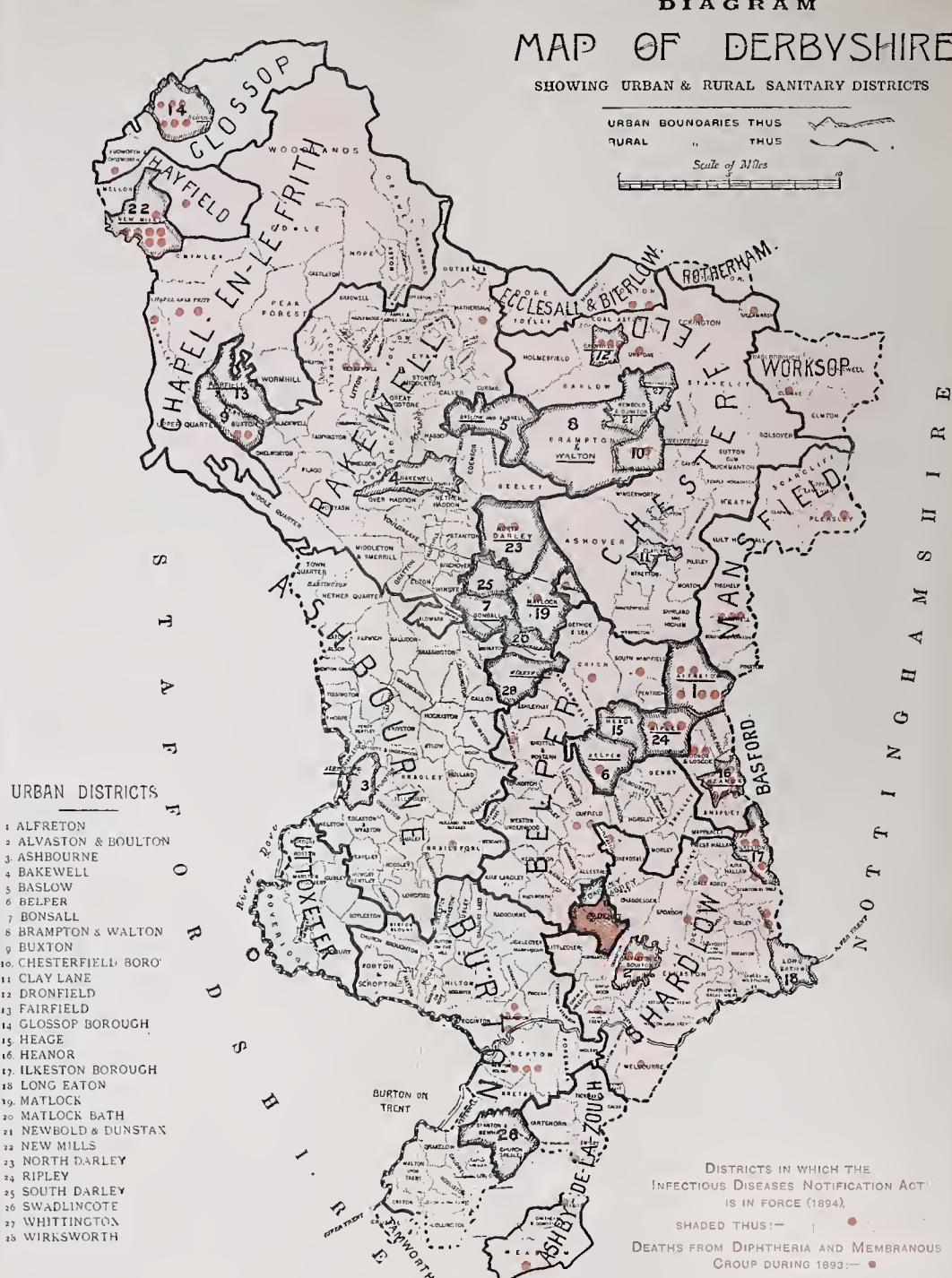
## DIAGRAM

## MAP OF DERBYSHIRE

SHOWING URBAN &amp; RURAL SANITARY DISTRICTS

URBAN BOUNDARIES THUS  
RURAL " " THUS

Scale of Miles





# SUGGESTED JOINT HOSPITAL DISTRICTS

DIAGRAM

## MAP OF DERBYSHIRE

SHOWING URBAN & RURAL SANITARY DISTRICTS

URBAN BOUNDARIES THUS  
RURAL " " THUS  
Scale of Miles



NOTTINGHAMSHIRE



Derbyshire County Council.



## ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

SIDNEY BARWISE, M.D., D.P.H., M.R.C.S., etc.,

FOR THE YEAR 1893.



BEMROSE & SONS, LIMITED, PRINTERS, DERBY; AND  
23, OLD BAILEY, LONDON.



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PUBLIC HEALTH COMMITTEE  
OF THE  
DERBYSHIRE COUNTY COUNCIL.

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To the Public Health Committee of the Derbyshire  
County Council.

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MY LORD AND GENTLEMEN,

The plan of the present Report is based upon the same lines as the three previous ones. I first deal with the Vital Statistics and Sanitary matters which are of more than merely local importance, such as the question of River Pollution, and the means of isolating persons suffering from Infectious diseases. In the second part of the Report, I have summarised the reports of the Local Medical Officers of Health, and in many instances have given my own recommendation after having visited the districts, and ascertained for myself the particulars referred to. This part of the Report is of great importance, because heretofore it has served as the programme for the investigations which, under your direction, are made during the ensuing year.

During 1893, I made two hundred and thirty-three quantitative analyses of sewage effluents, river waters, and water supplies for domestic purposes. In this way most valuable information is accumulating relative to the water supplies all over the County, and as to the efficacy of the various means of purifying sewage. To carry on this work, and to deal systematically with the enormous question of River Pollution, would be impossible without the aid of an Inspector. In addition to the work of collecting samples, inspecting, and reporting on the various sewage outfalls and manufacturers' pollutions, Mr. Outram has, when necessary, tested drains and sewers with smoke; he has, also, inspected the greater portion of the Rural districts prior to my visiting them, and in this way has rendered valuable assistance.

The County Notification Returns have been sent out at the beginning of each week. The value of the returns would be much increased if the Notification Act were in force all over the County. The information interchanged was of especial value during the epidemic of Small Pox, and while we were threatened by Cholera.

During the year I have attended the Council Meetings and sixteen Committee Meetings. I have also had one hundred and

fifty-two conferences with the Medical Officers of Health and other officials of the Sanitary Authorities. The majority of these consultations were the outcome of epidemics of infectious diseases, the most important of which were Cholera at Ashbourne and Ilkeston ; Small Pox at Bakewell, Chesterfield, Ecclesall Bierlow, Newbold and Dunston, Whittington, and other places ; Typhoid Fever in the Belper, Mansfield, and Worksop Rural Districts, and at Alvaston ; and Diphtheria in the Belper Rural District. I have also attended eight inquiries in the County, and given evidence in support of the Authorities on two occasions.

The sanitary work of the Council is increasing rapidly ; as evidence of this, I may mention that the correspondence has doubled each year. With the limited office accommodation, and the inconvenience of not having my laboratory in the same building as the office, as much work has been done as could under the circumstances ; but records should be kept of the varying sanitary details of every parish of the County, detailed quantitative analyses of all the rivers should be made each fortnight, and of the various sewage effluents each quarter ; besides this, all the public water supplies should be examined at least yearly. This is a programme which can only be carried out when we get into the new offices.

At the end of the Report a summary is given of the work done by the Sanitary Inspectors ; for this and other information not required by the Orders of the Local Government Board, which the Medical Officers of Health have courteously sent me, I have to acknowledge my indebtedness and tender my thanks.

I have the honour to be,

My Lord and Gentlemen,

Your obedient servant,

SIDNEY BARWISE.

*November 22nd, 1894.*

# REPORT ON THE HEALTH OF DERBYSHIRE, 1893.

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## PART I.

### THE COUNTY AS A WHOLE.

#### POPULATION.

The Populations given in this Report are, I believe, quite accurate. In the Report for 1892 the Population of the Rural Districts is put down at 236,000; this figure was obtained from the Reports of the Local Medical Officers. This year, owing to the publication of the complete Census returns, I have been able to get out the figures for myself. Of the 426,768 persons in the Administrative County at the Census, 1891, 202,198 resided in the twenty-eight Urban Districts and 224,570 in the Rural Districts.

#### BIRTHS.

The number of Births during the year was 15,620; being an increase of 313 on the number registered during the previous year. The Birth-rate for the year was 35.7 in the Urban Districts, and 34.8 in the Rural, while for the whole County it was 35.3. The highest Birth-rate was 47, registered in the Mansfield Rural District; while the Urban Districts of Heanor, Newbold and Dunston, and Whittington, all registered rates over 44 per 1,000.

#### DEATHS.

The number of Deaths registered in the County was 7,849, being a decrease of 500 on the previous year. The Death-rate in the Urban Districts was 18.9, while in the Rural Districts it was 16.6; that of the whole County being 17.5 per 1,000.

Table IV. gives the Death-rates from all causes—from Zymotic Diseases, from Diarrhoea and Typhoidal Fevers (Filth Diseases), from Phthisis and from Lung Diseases; also the Deaths of infants per 1,000 Births. A great amount of labour has been given in preparing these and the other statistical tables. In the course of years the information compiled will be exceedingly valuable; no deduction, however, can with safety be drawn from a high Death-rate from any cause occurring in one year only;

but where there is a persistently high rate from any cause, there is ground for inquiry. As an instance of this, I might call attention to the persistently high Death-rate of Clay Cross from Diarrhoea and Typhoid Fever.

### INFANTILE MORTALITY.

The Death-rate of Infants under one year was 171 per 1,000 Births in the Urban Districts, 129 in the Rural Districts, and 149 in the whole Administrative County. The following Districts had rates over 200 :—Whittington, 222; Chesterfield, 221; Glossop, 213; Ashbourne, 211; Newbold and Dunston, 207; Glossop (Rural), 205; and Dronfield, 202. The rate for England and Wales during 1893 was 159.

The following Table shows the Birth-rate, Death-rate, Zymotic Death-rate, and the Infantile Mortality in the Rural and Urban Districts of the County, and in the whole of England and Wales :—

DISTRICT.	RATES PER 1,000 OF POPULATION.			Deaths of Children under one year to every 1,000 Births.
	Births.	Deaths from all Causes.	Deaths from seven chief Zymotics.	
Rural Districts of Derbyshire	34·8	16·6	1·8	129
Urban Districts of Derbyshire	35·7	18·9	2·4	171
Whole Administrative County	35·3	17·5	2·1	149
England and Wales	30·8	19·2	2·47	159

### ZYMOTIC DEATH-RATE.

The Zymotic death-rate for the whole County was 2·1; in the Urban Districts it was 2·4, and in the Rural Districts 1·8 per 1,000. In spite of the epidemic of Small Pox, and the high rates of mortality from Diarrhoea, the total Zymotic death-rate was less than in 1892. This is due to the fact that in 1892 there were serious epidemics of Measles and Whooping Cough; the deaths from Measles in 1893 being 105, against 352 in the previous year; while Whooping Cough in 1893 was the cause of 121 deaths, against 241 in 1892.

The following table shows the share which the several Zymotic diseases have taken in contributing to the Zymotic death-rate during the last three years :—

**Death Rates from the Seven Principal Zymotic Diseases in the Urban and Rural Sanitary Districts during the last Three Years.**

		Small Pox.	Scarlatina.	Diphtheria and Croup.	Typhoid.	Measles.	Whooping Cough.	Diarrhoea.	Seven Principal Zymotics.
		EXPRESSED AS RATES PER 10,000.						EXPRESSED AS RATES PER 1,000.	
1891	Urban Districts	1.4	1.2	1.4	1.0	1.7	3.7	1.0	1.0
	Rural Districts	2.0	2.5	1.2	3.0	1.6	2.1	1.2	1.2
	Whole County	1.7	1.9	1.3	2.1	1.7	2.8	1.1	1.1
1892	Urban Districts	.2	1.2	2.4	1.6	8.8	6.6	4.4	2.5
	Rural Districts	.4	1.5	2.3	1.8	8.1	4.9	3.6	2.1
	Whole County	.3	1.3	2.3	1.7	8.3	5.7	4.0	2.2
1893	Urban Districts	2.0	1.5	2.3	2.4	2.6	2.6	11.2	2.4
	Rural Districts	2.1	1.1	2.0	1.2	2.1	2.8	7.3	1.8
	Whole County	2.1	1.3	2.1	1.8	2.3	2.7	9.1	2.1
1893	England and Wales	.5	2.3	3.0	2.4	3.6	3.3	9.6	2.47

The highest Zymotic death-rate was that of Newbold and Dunston, namely 7·8 per 1,000. This rate was due to twenty-one deaths from Small Pox and nineteen from Diarrhœa. The next highest rate was that of the adjoining district of Whittington, being 4·6; in this district there were twenty-three deaths from Diarrhœa, eight from Small Pox, and ten from other Zymotics. The highest Zymotic rate in the Rural Districts was that of the Glossop District, namely 4·4; towards this rate filth diseases contributed a rate of 3·1.

### SMALL POX.

The number of cases of Small Pox which, during the year, came to the knowledge of the Medical Officers of Health was 1,049. Of this number, ninety-three proved fatal. The disease was introduced into the County by the navvies working on the Dore and Chinley railway, and was spread by them not only all over the County, but to London and to other parts of the country. The navvies were overcrowded; the accommodation provided for them by the contractors being altogether insufficient. The men were working in night and day shifts, and as one lot turned out of bed another lot turned in. In addition to this, while working in the tunnel the men used the same overalls: in this way infection must frequently have been passed on from one to another.

I laid these facts before the Public Health Committee, who communicated with the Local Government Board suggesting that a clause should be inserted in all future railway and other Bills, for works necessitating the temporary employment of numbers of men, providing that temporary barracks should be erected by the undertakers for at least 75 per cent. of the men employed. Had this been done on the Dore and Chinley railway, the men would not have carried the disease into the cottages where they were lodging, as happened time after time during the outbreak.

Notwithstanding the warnings of their Medical Officers of Health, none of the Sanitary Authorities (except Buxton) had made the necessary provision for meeting an outbreak; the result was that temporary buildings were hurriedly erected, and a great deal of wasteful expenditure was incurred. The exact cost of the epidemic it is impossible to estimate, as it is difficult to ascertain the money value of the lives lost (in many instances of the bread-winners, leaving families chargeable on the rates) and the loss of wages; this alone, on the assumption that half the cases were working, would come to £2,700 (the wages being reckoned at 18s. a week, and the average duration of the illness being taken at six weeks): then there is the destruction of bedding and clothing, the stripping and re-papering of rooms, the cost of medical attendance, and in ninety-two instances that of funerals.

TABLE I.

Table giving Information as to the Ages and Vaccination of Cases of Small Pox reported in  
the County of Derby, 1893.

DISTRICTS.	CASES.			DEATHS.			VACCINATED.			NOT VACCINATED.		REMARKS.
	Under 5	Over 5	Total.	Under 5	Over 5	Total.	Cases.	Deaths.	Cases.	Deaths.	Cases.	
<b>URBAN.</b>												
ALFRETON	...	...	10	10	...	...	1	1	8	2	2	1
BAKEWELL	...	...	26	26	1	...	3	3	22	4	4	1
BELPER	...	...	1	1	...	...	...	...	1	...	...	...
BONSALE	...	...	6	6	...	...	...	...	...	...	...	...
BRAMPTON & WALTON	...	4	4	...	...	...	...	...	...	...	...	...
BUXTON	...	11	11	...	...	...	...	...	...	...	...	...
CHESTERFIELD	...	10	82	92	2	3	5	5	75	...	17	5
CLAY CROSS	...	...	...	1	...	...	...	...	...	...	...	...
DRONFIELD	...	...	...	6	6	...	...	...	...	...	...	...
FAIRFIELD	...	1	1	1	1	...	...	...	...	...	...	...
GLOSSOP	...	6	6	...	...	...	...	...	...	...	...	...
HEANOR	...	2	2	...	...	...	...	...	...	...	...	...
ILKESTON	...	1	1	...	...	...	1	1	1	1	1	...
LONG EATON	...	5	5	...	...	1	1	1	5	1	...	...
MATLOCK BATH	...	...	3	3	...	...	...	...	21	...	...	...
NEWBOLD & DUNSTON	...	...	176	12	9	...	...	...	...	...	1	...
NEW MILLS	...	1	1	...	...	...	...	...	...	...	1	...
NORTH DARLEY	...	1	1	...	...	...	...	...	1	...	...	...
RIPLEY	...	3	3	...	...	...	...	...	1	...	...	...
SWADLINCOTE	...	2	2	...	...	...	1	1	5	3	2	1
*WHITTINGTON	...	9	86	95	5	5	1	1	5	...	4	...
WIRKSWORTH	...	1	4	...	...	...	...	...	...	...	...	...

RURAL.													
BAKEWELL (SOUTH)	... 6	99	5	7	12	...	...	...	...	...	...	...	...
BAKEWELL (NORTH)	... 22	121	3	3	...	...	...	...	...	...	...	...	...
BELPER	... 3	3	3	3	...	...	...	...	...	...	...	...	...
BURTON-ON-TRENT	... 3	3	3	3	...	...	...	...	...	...	...	...	...
CHAPELL-EN-LE-FRITH	... 17	19	1	1	1	...	...	...	...	...	...	...	...
CHESTERFIELD	... 178	4	14	14	18	...	...	...	...	...	...	...	...
DARLEY ABBEY	... 1	1	...	...	...	...	...	...	...	...	...	...	...
ECCLESALL BIERLOW	... 222	11	8	8	19	130	19	19	19	16	...	...	...
GLOSSOP	... 2	8	...	...	...	...	...	...	...	...	...	...	...
HAYFIELD	... 16	2	...	...	...	...	...	...	...	...	...	...	...
MANSFIELD	... 6	6	...	...	1	1	...	...	...	...	...	...	...
SHARDLOW	... 2	2	...	...	...	...	...	...	...	...	...	...	...
WORKSOP	... 1,045	39	53	92	...	...	...	...	...	...	...	...	...
Total Cases and Deaths	... 44	390	431	12	21	33	...	...	...	...	...	...	...
Total Cases in which information is given as to Ages...	... 364	13	17	30	267	7	97	23					
When information is given of the Vaccination of Cases and Deaths	... 364	13	17	30	267	7	97	23					

This list does not include four cases occurring in Chesterfield before Dr. Gould was appointed Medical Officer, and details as to which are not available.

\* The vaccination of two fatal cases not stated.

† Vaccination doubtful, but included so as to give benefit of any doubt against Vaccination.

The following sums were expended by the authorities, but the list is by no means complete:—

Alfreton (ten cases), £88 13s. 6d.; Bakewell (twenty-six cases), £205; Belper (one case), £9 11s. 11d.; Bonsall (six cases), £28 18s. 2d.; Chesterfield (ninety-six cases), £819 7s. 8d.; Clay Cross (one case), £29 8s. 5d.; Dronfield (six cases), £7 14s. 6d., as compensation for bedding destroyed, etc.; Fairfield (one case), £10 10s.; Long Eaton (five cases), £32 15s. 2d.; Newbold and Dunston (one hundred and seventy-six cases), £534; New Mills (one case), £23 5s.; North Darley (one case), £4 3s.; Ripley (three cases), £8 11s.; Wirksworth (five cases), £45 10s.

Bakewell, Rural (one hundred and twenty-seven cases), £731 17s. 9d.; Belper (three cases), £7 10s.; Burton-on-Trent (three cases), £261 3s.; Chapel-en-le-Frith (nineteen cases), £125; Chesterfield, Rural (one hundred and seventy-eight cases), £222 9s. 6d.; Ecclesall Bierlow (two hundred and twenty-two cases), £645 3s. 5d.; Hayfield (two cases), £54 8s.; Mansfield (sixteen cases), £494; Shardlow (six cases), £83 12s. 6d.; Worksop (two cases), £11 4s. 4d.; in addition to this, Matlock expended £67 2s. in the early part of the year; making a total expenditure of over £4,500. If to this sum the value of the wages lost, the cost of funerals, of medical attendance, and poor law relief, be added, it will make the total cost of the epidemic not far short of £10,000, or an average of £10 a case. But, unfortunately, the expense does not end here. I have a letter from one of the Clerks to the Guardians dated July, 1894, stating that the widow and family of a man who died from Small Pox in the previous October, had since been in receipt of relief to the extent of 9s. a week, and I have no doubt that this is not an isolated instance.

With all the energy and money expended, only about one-half the cases were isolated. Had Chesterfield been provided with a hospital in readiness at the time when the first few cases were reported, instead of a temporary building which required a few days to be got in readiness, I have no hesitation in stating that there would not have been more than a dozen cases in the borough. The same might be said of the other districts; it is the first cases which require isolating, and, as a rule, with a temporary hospital it is not regarded as worth while opening it until several cases have occurred; then it is frequently too late.

In Table I. is a detailed list of the available information with regard to the cases. Several of the Medical Officers of Health have been at great pains to obtain detailed information with regard to the condition of the patients' vaccination; on the other hand, the majority have not forwarded information on this point. At the present time, when, owing to the laxity in administering the Vaccination Laws, the number of children unvaccinated is rapidly increasing, it is of the highest importance that exact information should be recorded.

## ON THE INFLUENCE OF VACCINATION ON THE OUTBREAK.

Details are given in Table I. as to the ages of 434 of the cases, and of the condition in respect of Vaccination of 364 cases. In addition to the information tabulated, Dr. Gould gives the following facts relating to cases treated in the Borough Hospital from Out-Districts :—

	Vaccinated— two or three marks.		Alleged Vaccinated, but no marks.		Un-Vaccinated.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Under 15	9	—	1	—	11	2
Over 15	68	2	3	2	11	4
At all ages	77	2	4	2	22	6

It will be noticed that there were no deaths amongst the vaccinated under 15 years, and even reckoning as vaccinated those with no marks but who alleged that they were vaccinated, *the mortality of the vaccinated was 5 per cent.*, while *the mortality of the un-vaccinated was 27 per cent.*

In addition to these cases, there are available the facts relating to the Whittington outbreak, as investigated by myself. The facts ascertained are tabulated below :—

## DETAILS AS TO 482 PERSONS EXPOSED TO SMALL POX INFECTION IN INFECTED HOUSES IN WHITTINGTON, 1893, TO MARCH, 1894 :—

	Vaccinated.			Not Vaccinated.		
	Persons exposed.	Attacked.	Died.	Persons exposed.	Attacked.	Died.
Under 10	159	11	—	21	15	5
10 to 20...	108	31	—	2	2	1
20 to 30...	83	35	2	2	2	—
Over 30...	109	39	5	—	—	—
At all ages	459	116	7	25	19	6

Here it will be noticed that there were no deaths amongst the vaccinated under 20 years. The full significance of these figures will be seen better by expressing them as percentages. It should be remembered that the attacks refer to persons *exposed to the infection*.

	Of every 100 Vaccinated.		Of every 100 Not Vaccinated.	
	Attacks.	Deaths.	Attacks.	Deaths.
Under 10 ...	6·9	—	71·4	23·8
Over 10 ...	35·0	2·3	100	25
At all ages...	25·2	1·5	76	24

From this table it will be seen that Small Pox is a most infectious disease, as many as 25 per cent. of the vaccinated persons exposed to the infection taking it, and three times that proportion of the un-vaccinated ; also that the risk of the un-vaccinated taking it and dying is sixteen times as great as that of the vaccinated class.

We have in Table I. records of 364 cases in which the condition as to vaccination of the persons attacked is stated. If we add to these the cases investigated by myself in Whittington at the end of 1893 and the beginning of this year, details of which are given, we have 499 cases, of which 383 were vaccinated and 14 died, while 116 were not vaccinated and 29 died.

*The mortality amongst the Vaccinated cases was*

*therefore ...   ...   ...   ...   ... 3·9 per cent.*

*The mortality amongst the Un-vaccinated cases was 25·0   , ,*

One point which is extremely striking is the large proportion of children dying under 5 years of age, *amounting to 40 per cent.* of all the deaths from Small Pox. In the eighteenth century, before the days of inoculation and vaccination, 90 per cent. of the deaths were contributed by children under 5 years of age ; from 1855 to 1859, in the English provinces, the percentage was 57 ; from 1860 to 1864, it was 56 ; from 1865 to 1869, 53 per cent. ; from 1870 to 1874 it fell to 30 per cent. Vaccination officers having been appointed in the interval, the percentage of deaths contributed by children under five went on falling until the proportion reached 19 per cent. So that the proportion of deaths under five years of age from Small Pox in Derbyshire was during the last epidemic twice as great as that in England five years before. To what extent this increase in the number of deaths under five years of age is due to the neglect of vaccination, is apparent after a glance at the following figures, which conclusively show that the contribution of children under five to the deaths from Small Pox has increased *pari passu* with the percentage of children un-vaccinated.

Percentage of Deaths from Small Pox contributed by Children under Five in England and Wales.			Percentage of Births not Vaccinated—England.			
In 1886	...	...	19·2	In 1884	...	5·3
In 1887	...	...	19·3	In 1885	...	5·5
In 1888	...	...	19·9	In 1886	...	6·1
In 1889	Deaths too few to express accurately as percentages	(13)		In 1887	...	6·7
In 1890		(25)		In 1888	...	8·2
In 1891		(34)		In 1889	...	9·6
In 1892	...	...	26·4	In 1890	...	10·9
In 1893—Derbyshire			40·0	„ —Derbyshire		10·5
				„ —Chesterfield		15·4

Besides the high percentage of children unvaccinated in the Chesterfield Union, the outbreak was in other parts of the county largely amongst navvies, a class whose children, moving about the country as they do, escape the vigilance of the vaccination officer.

In the face of these figures I do not think it is possible that the increased mortality of children should have any other explanation than the neglect of vaccination.

It will be seen that we are rapidly going back to the condition we were in at the end of the last century, when Small Pox claimed 90 per cent. of its victims from children under five years of age. As far as I am aware the Derbyshire 1893 epidemic has been the first to demonstrate the increasing mortality of children under five years of age, following the agitation against vaccination. The huge experiment of the anti-vaccinators has now surely been carried on long enough. No one can object to grown men refusing vaccination if they choose, but unfortunately it is not upon themselves that the experiment is carried out, but upon children unable to choose for themselves.

The following Table gives the last information published on the Vaccination of the County :—

UNION.	Births in 1890.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small Pox.	Died Un-Vaccinated.	Vaccination Postponed.	Remaining.	Percentage of Births in which Vaccination is postponed or not accounted for.
Ashbourne...	562	477	—		53	4	28	5·7
Bakewell ...	793	669	2	—	70	13	39	6·6
Belper ...	1,966	1,743	1	—	185	13	24	1·9
Chapel - en - le-Frith...	696	585	—	—	51	13	47	8·6
Chesterfield	3,792	2,853	1	—	355	82	501	15·4
Derby ...	2,597	1,893	4	—	289	28	383	15·8
Glossop ...	745	581	—	—	99	19	46	8·7
Hayfield ...	331	290	—	—	29	1	11	3·6
Shardlow ...	1,714	1,456	2	—	120	28	108	7·9
Registration County ...	13,196	10,547	10	—	1,251	201	1,187	10·5

Unfortunately, owing to the delay in publishing the report of the Vaccination Commission, the number of children who are not vaccinated is greatly increasing; it has more than doubled during the last seven years for which statistics are available. The Belper Board of Guardians have set an example which

the other Guardians in the County might well follow, and the ratepayers during the late epidemic reaped the benefit; for although Small Pox was introduced into the Union on five different occasions, it did not spread.

The Reports of the Medical Officers of Health contain many striking examples of the extreme infectivity of the disease: this point is also well exemplified in the table referring to the Whittington outbreak, where it will be seen that 76 per cent. of the unvaccinated living in infected houses took the disease, and 25 per cent. of those who were vaccinated. A number of those whose duties brought them in contact with the disease, I am sorry to say, refused re-vaccination, and paid the penalty by taking the disease. At Alfreton, Inspector Munslow and a man who helped him to put in a coffin the body of a person who died from Small Pox both took the disease; at Glossop, the porter at the Workhouse and the man who helped him in looking after the tramps, both took it; also two men who were employed to disinfect a room. A man who was employed by the Shardlow Guardians to see after two tramps who had the disease caught it; while six cases arose in Bakewell Workhouse from cases sent in. At Long Eaton, the husband of a woman who was looking after a case of Small Pox caught the disease, while the woman herself was re-vaccinated and escaped. These instances could be multiplied, but they suffice to show that Small Pox is one of the most infectious diseases we have to deal with, yet not one of the officials who had been re-vaccinated and who were in close contact with the disease took it.

The reports contain many examples of the protection afforded by vaccination in particular cases. The following is one of the most striking instances. It is recorded by Mr. Gale, the Medical Officer of Health of Ecclesall Bierlow. The head of the family referred to was a leading local anti-vaccinator.

Father, vaccinated in infancy, not attacked.

Mother, vaccinated and re-vaccinated, not attacked.

S., aged 17 years, unvaccinated, severe Small Pox; recovered.

W., ,	13	,	,	,	,	,	"
-------	----	---	---	---	---	---	---

A., ,	11	,	,	,	,	,	died."
-------	----	---	---	---	---	---	--------

E., ,	10	,	,	,	,	,	"
-------	----	---	---	---	---	---	---

J., ,	8	,	vaccinated and re-vaccinated,	not attacked.			
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C., ,	6	,	vaccinated 6 days before the first symptom				
			of the disease, too late to give protec-				
			tion, severe Small Pox; recovered.				

N., ,	4	,	vaccinated, not attacked.				
-------	---	---	---------------------------	--	--	--	--

G., ,	2	,	,	,	,	,	
-------	---	---	---	---	---	---	--

Many other instances are reported, but it is unnecessary to give further evidence.

### SCARLATINA.

Scarlatina was the cause of 59 deaths, against 66 in the previous year. This disease comes in waves, the epidemics varying in severity. The type of the disease which was prevalent in 1893 was extremely mild, only 3·7 per cent. of the cases proving fatal, even less than the case mortality of the disease in England in 1892, which was 4·4 per cent.; the average case mortality on a number of years approaches 10 per cent. In Table III. for the Report for last year, I showed that the death-rate for the previous ten years was higher in the County than in the rest of England by ·03 per 1,000; so that there were in the previous ten years from 130 to 260 more cases of Scarlet Fever per annum than was the share of the County.

### MEASLES.

During the year 105 deaths were caused by this disease; it is not now notifiable in any district in the County. I think it highly desirable that, with the consent of the Local Government Board and the Education Department, some arrangement should be made for the School Attendance Officers to notify to the Medical Officers of Health cases of this disease which they come across in performing their duty. Unfortunately, Measles is extremely infectious before the appearance of the rash, and as a medical man is in the majority of instances only called in to treat complications consequent upon the disease, the notification which he would be able to send to the Sanitary Authority would, in the majority of instances, only be after the mischief had been done, and the public would not get any benefit compensatory for the fee paid; this, however, would not apply to a small fee of a few pence paid to the School Attendance Officer to notify all suspicious cases. Besides this, great good would result if arrangements could be made for a medical man to visit the Public Elementary Schools each day, to rapidly examine the children with a view to detecting infectious diseases in their earliest stages. The risk of epidemics of Measles, however, will diminish as mechanical ventilation of Public Elementary Schools becomes more general.

### TYPHOID FEVER AND DIARRHŒA.

As I have pointed out in previous Reports, one of the best indices of the Sanitary condition of a district is its death-rate from these diseases. The rate in 1893 was twice as high as in 1892, namely, 1·1 per 1,000. This was one of the results of the drought. Clay Cross, Newbold and Dunston, and the Glossop Rural District, all had rates over 3 per 1,000.

### DIPHTHERIA AND MEMBRANOUS CROUP.

The death-rate from this cause was ·21 per 1,000, against ·30 in England and Wales. During the last twenty years the number

of deaths in England and Wales from Diphtheria has doubled. The increase has been chiefly amongst children from 3 to 12 years of age, and indirectly is the result of the aggregation of large numbers of children in imperfectly ventilated schools. Dr. Thorn Thorn has, in his Milroy Lectures, given ample grounds for this conclusion; and several of the reports this year bring forward further evidence in favour of it; that in the Report of the Medical Officer of Health of Heanor (*vide* page 68) is particularly strong.

Fortunately, in this case there are strong grounds for believing that we shall soon have at our disposal a method of treatment and a means of temporary protection. In 1893, 22·7 per cent. of the cases notified in the County died; and the cases notified included a number of mild cases, which some of the Medical Officers thought were not Diphtheria. The mortality amongst severe cases of true Diphtheria, which have been treated in this Country by prepared serum, is only 10 per cent. The number of cases yet treated is too few to express a final opinion upon; but if the method proves successful, it is obvious that it could best be carried out in proper isolation hospitals, where the serum would always be kept in readiness. As regards the prevention of the disease, isolation, disinfection, and the mechanical ventilation of the Public Elementary Schools, are the lines upon which the disease is to be attacked. As in previous years, the map in the front of the Report shows where fatal cases occurred.

#### THE INFECTIOUS DISEASES NOTIFICATION ACT.

The following Authorities have not yet (1894) adopted the Act:—

URBAN DISTRICTS—					POPULATION.
Bonsall	...	...	...	...	1,329
Clay Cross	...	...	...	...	7,727
Matlock	...	...	...	...	5,285
Whittington	...	...	...	...	8,798
 RURAL DISTRICTS—					
Ashbourne	...	...	...	...	10,631
Burton-on-Trent	...	...	...	...	14,562
Glossop	...	...	...	...	4,383
Uttoxeter	...	...	...	...	2,589
					<hr/>
					55,304

In addition, the newly-formed Urban Sanitary District of Bolsover, with a population of 3,686, has not yet adopted the Act. The Act has now been adopted by districts representing a population of over 25 000,000 out of the 29,000,000 in England and Wales. The annexed diagram shows the seasonal

prevalence of the four chief diseases notified, and the map in front of the Report, the districts in which the Act is in force.

Table II. gives the number of cases notified, the number of deaths in each Sanitary District, and the percentage of the cases which proved fatal. Table III. gives the case rates per 1,000 of population, the numbers of cases removed to hospital, and the cost of notification.

### ISOLATION HOSPITALS.

From the tables referring to the Notification Act it will be seen that altogether over 3,500 cases of Small Pox, Scarlatina, Diphtheria, and Typhoid Fever, were reported to the Medical Officers of Health during 1893; of this number 510 were removed to Isolation Hospitals, 471 being cases of Small Pox. Only 1 per cent. of the cases of Scarlatina were removed, 3·7 per cent. of the Typhoid Fever, and not a single one of the 396 cases of Diphtheria. The cases of Small Pox were removed to temporary Hospitals, many of which were overcrowded, and so constructed as to be unsuitable for the reception of sick persons. Although the temporary Hospitals which were put up served for Small Pox, I have no hesitation in saying that it would be wrong to remove to them children suffering from Scarlatina; persons suffering from this disease require not only adequate cubic space, but a constant steady temperature, and frequent hot baths, which could not be provided in any of the temporary Hospitals.

The previous annual reports have made constant references to the necessity for proper Isolation Hospitals. This year, the Medical Officer of Alfreton again urges his Authority to unite with their neighbours, and the Board have made an application to the County Council to put their powers in force for providing an Isolation Hospital for the district. The Medical Officer of the Ashbourne Urban District, referring to the outbreak of Cholera, writes, "the necessity for a Hospital in which to isolate first cases of infectious disease has been clearly demonstrated." In the Bakewell Urban District the Fire Engine-house was improvised as a Fever Hospital. A wooden shed was afterwards put up. Referring to this, Dr. Evans writes, "This hospital proved fairly suitable for summer use, but the disadvantage of having no proper hospital which could be made ready at short notice caused great inconvenience." The Medical Officer of the Belper Urban District found a case of Scarlatina in the desquamating stage in a house which was used for chevining stockings, and points out that the disease might be spread in this way to almost any extent.

Dr. Gould (of Chesterfield) writes, "Unfortunately, there is no Hospital for Infectious Diseases other than the temporary one for Small Pox, so that infectious diseases other than Small Pox have not been dealt with in the most efficient manner. Several times

TABLE II.

Table showing the number of cases of Infectious Diseases in each District, also the number of Deaths from diseases notified.

URBAN SANITARY DISTRICTS.	Small Pox.		Scarlatina.		Diphtheria and Croup.		Enteric & Contagious Fevers.		Puerperal Fever.		Erysipelas.	
	No. of Cases.	No. of Deaths.	Cases.	No. of Deaths.	Cases.	No. of Deaths.	Cases.	No. of Deaths.	Cases.	No. of Deaths.	Cases.	No. of Deaths.
† ALFRETON	...	...	10	1	29	2	7	5	18	2	19	2
† ALVASTON & BOULTON	...	...	...	...	5	...	14	...	3	...	...	...
† ASHBOURNE (since April)	...	...	26	3	2	...	14	5	1	5	...	...
† BAKEWELL	...	...	...	...	...	...	2	...	...	8	...	...
† BASLOW & BUBNELL	...	...	...	...	6	...	...	...	...	1	...	...
† BELPER	...	...	...	...	7	...	1	1	...	9	...	...
† BONSALL (Act not in force)	...	...	1	...	...	...	...	...	...	...	...	...
BRAMPTON & WALTON (Act adopted 1894)	...	...	6	...	...	...	...	...	...	...	...	...
BUXTON	...	...	4	...	...	...	...	...	...	...	...	...
† CHESTERFIELD (Borough)	...	...	11	...	19	...	1	2	29	5	2	6
CLAY CROSS (merely voluntary notification)	...	...	6	...	191	5	10	2	28	4	1	33
† DRONFIELD	...	...	...	...	29	1	...	...	...	...	...	1
FAIRFIELD	...	...	...	...	35	2	...	...	...	...	...	1
GLOSSOP	...	...	...	...	3	1	8	3	1	...	...	...
HEAGE (Act not in force)	...	...	...	...	69	2	48	6	48	9	11	10
THEANOR	...	...	...	...	...	...	...	...	7	7	...	...
† HILKESTON (since April)	...	...	...	...	24	1	66	7	32	9	11	21
LONG EATON	...	...	...	...	112	4	10	5	90	9	3	3
MATLOCK (Act not in force)	...	...	...	...	145	8	7	1	23	3	2	24
MATLOCK BATH (Act adopted 1894)	...	...	...	...	...	1	...	...	1	...	...	...
† NEWBOLD & DUNSTON	...	...	3	...	...	...	...	...	3	1	...	3
NEW MILLS (since October)	...	...	...	...	176	21	10	...	8	7	1	4
† NORTH DARLEY	...	...	...	...	1	...	...	...	3	2	1	...
TRIPLEY	...	...	...	...	1	...	14	2	7	3	1	6
† SOUTH DARLEY	...	...	...	...	3	...	14	...	...	5	1	...
SWADLINCOTE	...	...	...	...	2	1	11	1	6	2	2	2
WHITTINGTON (Act not in force)	...	...	95	8	1	...	15	2	...	14	...	5
† WIRKSWORTH	...	...	5	1	...	...	...	...	...	...	...	1
28 URBAN DISTRICTS...	...	...	462	42	742	31	193	49	340	53	19	12

† Notification Act in force.

TABLE II.—CONTINUED.

Table showing the number of Cases reported in each District under the Infectious Diseases Notification Act, also the number of Deaths from diseases notified.

RURAL SANITARY DISTRICTS.		Small Pox.	Scarlatina.	Diphtheria and Croup.	Enteric & Continued Fevers.	Puerperal Fever.	Erysipelas.
	No. of Cases.	No. of Deaths.	No. of Cases.	No. of Deaths.	No. of Cases.	No. of Deaths.	No. of Cases.
ASHBOURNE (Act not in force)	...	...	9	2	6	3	...
† ASHBY-DE-LA-ZOUCH	...	...	27	1	9	3	14
BAKEWELL (SOUTH)	...	...	15	1	3	2	5
† BAKEWELL (NORTH)	...	...	12	...	4	3	2
† BASFORD	...	...	12	...	2	1	5
† BELPER (A.)	...	...	19	...	9	...	9
† BELPER (B.)	...	...	20	...	5	...	10
BURTON-ON-TRENT (Act not in force)	...	...	11	2	5	1	...
† CHAPEL-EN-LE-FRITH	...	...	12	2	1	1	...
† CHESTERFIELD	...	...	10	2	5	1	...
DARLEY ABBEY (Act not in force)	...	...	71	1	16	4	3
† ECCLESALL BIERLOW	...	...	206	13	23	3	6
GLOSSOP (Act not in force)	...	...	19	1	12	3	1
† HAYFIELD	...	...	178	18	91	5	...
† MANSFIELD	...	...	222	19	23	2	...
† ROTHERHAM	...	...	8	...	1	3	1
† SHARDLOW	...	...	22	...	2	1	2
† TAMWORTH	...	...	114	2	114	8	45
† UTOXETER (Act not in force)	...	...	11	1	2	1	1
† WORKSOP	...	...	6	...	7	19	18
	...	...	47	4	23	2	...
	...	...	...	...	...	...	...
	...	...	24	...	7	1	...
	...	...	...	...	1	19	6
	...	...	587	51	661	27	...
28 URBAN DISTRICTS	...	...	462	42	742	31	29
18 RURAL DISTRICTS	...	...	587	51	661	27	30
WHOLE COUNTY	...	...	1,049	93	1,403	58	39
Percentage of Deaths to Cases notified in }	9·1	3·7	22·7	11·4	54·1	4·2	...
Districts marked † during 1893 }	...	...	23·6	17·0	73·4	4·7	...
Percentage of Deaths to Cases notified in }	10·0	4·4					22

† Notification Act in force.

as many as six cases of the same infectious disease have occurred within a short period in the same house, leaving the house a source of infection for months together, and a danger to the public health. If it had been possible to isolate the first cases the source of infection would have been removed, and the house, in a few days, probably declared free from infection." The Medical Officer of Newbold District, referring to the Small Pox outbreak, says, "The Hospital has been of great help in the attempt to stamp out this disease. Unfortunately, in the months of August, September, and October, the Hospital was unable to accommodate all the cases, and the result was a rapid increase of the disease."

All the reports, indeed, refer to the advantage that even the temporary Hospital accommodation has been, and I feel that in the face of the epidemic that we have gone through it is unnecessary to multiply instances. I should like, however, to call attention to the fact that more than 5 per cent. of the tenements in the County are of either only one or two rooms, while 11 per cent. in the Urban and 13 per cent. in the Rural Districts have only one, two, or three rooms; under these circumstances it is impossible to isolate cases of infectious disease at home, and the infection is bound to spread unless the first case is removed.

There is another argument in favour of Hospitals that must be borne in mind, that is, that the mortality is less amongst the cases removed to Fever Hospitals than amongst those not isolated; this is no doubt due to the skilled nursing and increased cubic space, and in the future the advantages of being removed to a Hospital equipped with all the appliances of modern medical science will intensify the difference in the mortality. Indeed it is almost impossible for the inhabitants of some of the rural villages to obtain the benefits accruing from the most recent researches except by being removed to a Hospital.

At the end of 1893 the Isolation Hospitals Act was passed, which enables the County Council to form joint Committees, which shall become the Hospital Authorities for groups of Sanitary Districts. The only way a Sanitary Authority can avoid being joined with other Authorities is by themselves providing an Isolation Hospital to the satisfaction of the Local Government Board; anyone who knows the requirements of the Board with regard to Isolation Hospitals will at once see that this is impracticable with all the Authorities in the County, with the exception of the Boroughs (to which the Act does not apply without their consent), the Chesterfield Rural Sanitary Authority, and perhaps one or two others. By referring to the accompanying map it will be seen that by placing twelve Hospitals in suitable situations the whole County could be served, so that about 421,000 of the 426,768 persons in the County would be within eight miles of

a Hospital, while all the Urban Districts and the Workhouses would be within six miles.

If, however, the Boroughs or any of the other Sanitary Authorities start to provide Hospitals for themselves far more than twelve Hospitals will be necessary. By uniting, not only is the initial cost of construction much less, a larger Hospital costing proportionally less than a smaller one (for instance, the minimum cost of construction of a Sixteen Bedded Hospital is £228 a bed, while that of a Twenty-eight Bedded Hospital is £192), but the cost of maintenance is considerably less, while the nursing and medical appliances can be more efficient. These considerations led the Public Health Committee to the conclusion that a scheme as sketched out was for the benefit of the whole County, and to ask the Council to contribute a small capital sum towards the structural expenses of the Hospitals.

If the County Council decides to give a contribution out of the County rate, I believe that the Sanitary Authorities will only be too glad to avail themselves of it, and it will lead to the Hospitals being erected upon the lines suggested. Buxton has already provided its district with a proper Hospital; the Board, however, raise no objection to a contribution from the County rate being given towards a general scheme, and do not ask for any contribution for themselves.

I have inspected the Hospitals which the various Sanitary Authorities have provided. Before giving details as to these, I should like to call attention to some of the requirements of the Local Government Board with regard to Isolation Hospitals—

- (i.) The fabric of a Hospital should be of a permanent character, brick or stone, not galvanized iron or wood; each bed should have at least 2,000 cubic feet of air space, 144 feet of floor space, and 12 feet of wall space.
- (ii.) It should have a separate administrative department and Nurses' Home.
- (iii.) It should be capable of isolating at the same time two kinds of Infectious Diseases in persons of both sexes.
- (iv.) Each block should be separated by a clear space of 40 feet, and the site should be properly fenced round, no building coming within 40 feet of the fence.
- (v.) Small Pox must be treated on a separate site by itself.
- (vi.) It should be provided with a proper Steam Disinfector, and should have an adequate supply of pure water for baths, cooking, and drinking purposes. It should be properly sewered and drained.

In addition to these, if the Hospital is to be a joint one, or to be for the "benefit of the whole County," so as to be in a position to get a grant from the County rate, it should be on a good system of roads, so as to be able to serve the district about eight

miles round ; it should have a proper ambulance and be in connection with the telegraph system.

The following are the arrangements for isolation at present in existence :—

### URBAN AUTHORITIES.

**BAKEWELL.**—This Authority has erected a temporary wooden structure ; it has no separate administrative block, and the nurses are supposed to sleep in the ward. There is no proper water supply, and what is used is carted. The structure was erected to deal with cases of Small Pox last year, and cannot be considered fit for the reception of children suffering from Scarlet Fever.

**BUXTON.**—This building comprises three distinct blocks. The administrative cottage has three rooms downstairs and three rooms upstairs, a bath room, and a water closet. The Isolation Block, erected after the plan of the Local Government Board, is in two distinct parts, each part consisting of a nurses' room, and a small ward on either side, one single-bedded and the other double-bedded. (The objection to this plan is that one nurse can only look after three patients.) There is also a block made up of an ambulance house, mortuary, disinfecting room, and laundry. The building has been erected on a piece of spare land close to the gas works. The exterior walls are of Yorkshire parpoints, 15 inches thick ; the interior walls of  $4\frac{1}{2}$  inches in brickwork. The entire space under the building has been covered with a layer of asphalte. The floor space per bed is 144 feet, and the cubic air space, 2,016 feet. The Hospital is ventilated by means of Tobin's tubes, and air inlets under each bed ; the upper portion of each window also opens so as to form a fan-light ventilator, the bottom of each window being fitted with Hinckes Bird's ventilators. Each ward has also an exhaust cowl. A portable bath on wheels is provided for each ward. The disinfecting apparatus is one of Washington Lyons' high pressure steam chambers, manufactured by Messrs. Manlove & Alliott, of Nottingham.

**CHESTERFIELD.**—This Authority has provided a Soudan hut, divided into two wards, 16 feet wide and 19 feet long, and 16 feet wide and 15 feet long, respectively, and a kitchen, pantry, and two maids' bedrooms ; a galvanized iron block, part of which is used as a nurses' bedroom, and part as a bathroom ; also a large block, 17 feet wide and 27 feet long, used as a ward, and a small detached wash-house and mortuary. During the winter months, the condition of the patients in it must have been prejudiced on account of the difficulty of keeping the place warm, and at the same time adequately ventilated.

**CLAY CROSS.**—Two cottages are owned by this Authority, but are altogether unsuitable for the purpose of an Isolation Hospital. I understand that only one patient has ever been isolated in the

building, and at the present time the cottages are occupied by tenants who each pay 3s. 9d. per week rent. The building has evidently never been intended for anything but the isolation of Small Pox in cases of emergency.

**DRONFIELD.**—This Authority has purchased a row of four cottages ; they are unfurnished, and have never been occupied as a hospital. One of the cottages abuts upon a road, and altogether the building is one which is quite unsuitable for the purpose of a Hospital.

**GLOSSOP.**—In conjunction with the Glossop Rural Authority, the Corporation has erected a building of three wards, each to accommodate two patients, and a separate administrative cottage. Part of the building is of stone and part of wood ; the whole is covered with slate, and is built upon a good foundation. The site is an admirable one for the purpose, and the present building should form the nucleus of a proper permanent Isolation Hospital.

**HEANOR.**—This Authority has purchased an old three-storied cottage. It would be impossible to make use of it systematically on the ground of expense in nursing the patients, as in it a nurse could not possibly look after more than two patients.

**ILKESTON.**—This Authority has erected a partly brick, and partly galvanized iron Hospital, capable of isolating ten patients. The site belongs to the Corporation, but there is hardly any room for extension. In the event of a Joint Hospital District being formed the present building should be retained as a Small Pox Hospital, and a new building be erected for the purpose of isolating Scarlet Fever, Diphtheria, and other infectious diseases than Small Pox.

**NEWBOLD AND DUNSTON.**—This Authority has a temporary Hospital of galvanized iron, lined with wood, capable of dealing with eight patients. There is no separate administrative block, and the nurses' rooms are only separated from the wards by partitions of wood. There is no ambulance, disinfecting apparatus, or proper supply of water laid on. The building was only erected last year to cope with the epidemic of Small Pox, and is open to the same objections as the Chesterfield temporary Hospital. The Hospital might be usefully acquired by the Joint Hospital for the district for emergency purposes.

**NORTH DARLEY.**—This Authority has had the offer of a barn made to them by the Whitworth Trustees. It would take several days to get it in readiness, and is not suitable for the permanent requirements of the district.

**WIRKSWORTH.**—This Authority has purchased a small galvanized iron and wood structure, capable of isolating two patients, in addition to providing accommodation for a nurse. The structure would be useless, except in a great emergency. If a Joint Hospital for the district is provided, it might be retained for some purpose.

## RURAL AUTHORITIES.

**ASHBY-DE-LA-ZOUCH.**—An Isolation Hospital belonging to this Authority is situated at Swannington, in the County of Leicester. It is one of Humphries' Iron Buildings, and, like all these structures, is extremely difficult and expensive to maintain at a sufficient temperature in cold weather.

**BASFORD.**—In the Nottinghamshire portion of this district, the Authority are providing a Hospital, which eventually is to have forty-four beds. At first, provision will be made for twenty-two patients, and an administrative block, suitable for a Hospital of forty-four patients, will be put up. Six and a quarter acres of land, at a cost of £2,000, have been acquired. The gas and water of the Nottingham Corporation will be laid on, and the building will drain into the Nottingham Sewers. Altogether, the Authority have applied to the Local Government Board for sanction to a loan of £11,000 for this purpose. After the Local Government Act of 1894 comes into force, this Hospital will have no connection with the County of Derby.

**BURTON.**—This Authority has provided two wooden huts, covered with galvanized iron. There is no proper water supply, and the structure is merely of a temporary kind, useful enough in an emergency, but certainly not suitable for the permanent requirements of the district.

**CHESTERFIELD.**—The Morton Hospital is to be removed from its present situation, the time for which the land was rented having expired.

**ECCLESALL BIERLOW AND MANSFIELD** put up some temporary wooden huts, which in a short time ought to be burned.

**TAMWORTH.**—This Authority has, at the cost of £3,000, put up a permanent Hospital with twelve beds. The District of this Authority ceases to be a part of Derbyshire next December.

## THE TWELVE SUGGESTED JOINT HOSPITAL DISTRICTS.

The following tables show the constitution of the joint Hospital Districts, also their populations, and the average number of cases of Infectious Disease occurring in the joint Hospital Districts.

(The number of cases of infectious disease is calculated on the average of the last  $2\frac{1}{2}$  years. Where the Notification Act is not in force, they are calculated from the number of deaths.)

## GLOSSOP COMBINED HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.				
		Small Pox.	Scarla- tina.	Diph- theria & Croup.	Typhoid	Total.
Glossop Borough	22,414	6	68	28	27	
Glossop Rural	4,383	...	2	1	...	
Hospital District	26,797	6	70	29	27	132

Minimum number of Beds required, 15.

## CHAPEL-EN-LE-FRITH COMBINED HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.				
		Small Pox.	Scarla- tina.	Diph- theria	Typhoid	Total.
Chapel-en-le-Frith (R.S.A.)	14,013	9	75	13	4	
New Mills (Urban)	6,661	1	21	2	2	
Fairfield (Urban)	2,103	1	2	1	1	
Mayfield (R.S.A.)	3,952	1	14	5	3	
Hospital District	26,729	12	112	21	10	155

Minimum number of Beds required, 16.

## NORTH BAKEWELL HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.				
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid	Total.
Bakewell (R.S.A.)	14,283	24	24	4	1	
Bakewell (Urban)	2,748	9	2	...	1	
Baslow & Bubnell (Urban)	864	...	4	1	...	
Hospital District...	17,895	33	30	5	2	70

Minimum number of Beds required, 12.

## SOUTH BAKEWELL HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox	Scarla- tina.	Diph- theria.	Typhoid		
Bakewell (R.S.A.) ...	4,194	12	12	2	...		
North Darley (Urban) ...	2,179	1	3	1	1		
South Darley (Urban) ...	754	...	1	...	...		
Matlock (Urban) ...	5,285	2	2	1	1		
Matlock Bath (Urban) ...	1,846	1	...	...	1		
Wirksworth (Urban) ...	3,725	2	23	1	7		
Bonsall (Urban) ...	1,329	2	1	1	...		
Ashbourne (R.S.A.) ...	1,007	...	...	...	...		
Hospital District...	20,319	20	42	6	10	78	

Minimum number of Beds required, 15.

## NORTH CHESTERFIELD HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Chesterfield (R.S.A.) ...	36,591	38	117	17	28		
Worksop (R.S.A.) ...	3,808	1	29	2	12		
Ecclesall Bierlow (R.S.A.)	8,044	42	33	20	6		
Dronfield (Urban) ...	3,438	4	16	10	1		
Hospital District...	51,881	85	195	49	47	376	

Minimum number of Beds required, 28.

## SOUTH CHESTERFIELD HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Chesterfield (R.S.A.) ...	21,791	30	94	14	23		
Mansfield (R.S.A.) ...	10,222	8	80	16	80		
Worksop (R.S.A.) ...	3,022	1	20	2	12		
Clay Cross (Urban) ...	7,727	1	15	...	18		
Bolsover (Urban) ...	3,662	...	1	...	...		
Hospital District...	46,424	40	210	32	133	415	

Minimum number of Beds required, 28.

## CHESTERFIELD URBAN HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Chesterfield (Borough)...	22,009	62	116	7	13		
Brampton & Walton (Ur.)	2,532	1	18	2	2		
Newbold & Dunston (Ur.)	5,192	71	5	...	3		
Whittington (Urban) ...	8,798	77	2	...	6		
Hospital District... ...	38,531	211	141	9	24	385	

Minimum number of Beds required, 28.

## MID-DERBYSHIRE HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Belper (R.S.A.)...	13,420	1	18	12	20		
Mansfield (R.S.A.)	6,551	4	34	8	34		
Basford (R.S.A.)	4,925	...	19	39	9		
Alfreton (Urban)	15,355	3	35	13	16		
Belper (Urban) ...	10,420	1	5	1	4		
Ripley (Urban) ...	6,815	1	6	3	1		
Heage (Urban) ...	2,490	...	1	...	1		
Hospital District... ...	59,976	10	118	76	85	289	

Minimum number of Beds required, 28.

## ASHBOURNE COMBINED HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Ashbourne (R.S.A.) ...	9,624	...	14	5	3		
Uttoxeter (R.S.A.) ...	2,589	...	20	6	...		
Burton-on-Trent (R.S.A.)	1,634	...	1	...	...		
Ashbourne (Urban) ...	3,810	...	4	1	10		
Hospital District... ...	17,657	...	39	12	13	64	

Minimum number of Beds required, 12.

## DERBY RURAL HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Shardlow (R.S.A.) ...	14,043	6	30	13	10		
Burton-on-Trent (R.S.A.)	3,267	1	3	3	...		
Belper (R.S.A.) ...	8,296	...	12	8	13		
Alvaston & Boulton (Ur.)	3,116	...	10	6	8		
Hospital District... ...	28,722	7	55	30	21	113	

Minimum number of Beds required, 16.

## EREWASH VALLEY HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Shardlow (R.S.A.) ...	8,588	...	17	10	9		
Basford (R.S.A.) ...	689	...	...	...	...		
Belper (R.S.A.) ...	1,455	...	...	...	...		
Ilkeston (Borough) ...	19,744	1	50	12	54		
Heanor (Urban) ...	9,779	1	9	21	17		
Long Eaton (Urban) ...	9,636	2	50	10	7		
Hospital District... ...	49,891	4	126	53	87	270	

Minimum number of Beds required, 28.

## SWADLINCOTE AND BURTON RURAL HOSPITAL DISTRICT.

	Popula- tion.	CASES PER ANNUM.					Total.
		Small Pox.	Scarla- tina.	Diph- theria.	Typhoid		
Ashby - de - la - Zouch (R.S.A.) ...	7,013	...	40	7	7		
Shardlow (R.S.A.) ...	3,528	...	...	...	...		
Burton (R.S.A.) ...	9,661	2	7	6	1		
Swadlincote (Urban) ...	13,889	4	6	4	10		
Hospital District... ...	34,091	6	53	17	18	94	

Minimum number of Beds required, 16.

## SUMMARY OF THE ABOVE TABLES.

HOSPITAL DISTRICTS.	Rateable Value (County Rate Basis). £	Population.	No. of Cases of Infectious Disease per annum.	Sug- gested No. of Beds re quired.
Glossop Combined District ...	99,398	26,797	132	15
Chapel-en-le-Frith     ,,     ...	178,104	26,729	155	16
North Bakewell     ...     ...	122,628	17,895	70	12
South Bakewell     ...     ...	103,659	20,319	78	15
Chesterfield Urban District ...	121,445	38,531	385	28
North Chesterfield Rural     ...     ...	223,825	51,881	376	28
South Chesterfield Rural     ...     ...	222,578	46,424	415	28
Mid Derbyshire     ...     ...	236,739	59,976	289	28
Ashbourne Combined District..	172,272	17,657	64	12
Derby Rural     ...     ...	204,618	28,722	113	16
Ilkeston Combined District ..	218,763	49,891	270	28
Swadlincote & Burton-on-Trent	186,258	34,091	94	16

## DISINFECTION OF CLOTHING, &amp;c.

In connection with the Isolation Hospitals there would be joint Steam Disinfectors ; there are at present in the County only two of these appliances, one at Chesterfield, and another at Buxton. These appliances cost between £300 and £400, and for most of the Authorities to purchase one for their own use is out of the question ; this is another argument in favour of the joint Hospitals. That the money spent on a Steam Disinfecter is soon repaid by the saving of bedding, clothing, &c., which without it would have to be destroyed, is evident from the following list given by Dr. Gould of the articles disinfected in the latter half of 1893, since the purchase of the Disinfecter by the Corporation of Chesterfield :—

Mattresses	...	...	...	...	78
Beds	...	...	...	...	59
Bolsters	...	...	...	...	50
Pillows	...	...	...	...	99
Sheets	...	...	...	...	81
Blankets	...	...	...	...	62
Counterpanes	...	...	...	...	53
Curtains	...	...	...	...	10
Carpets	...	...	...	...	26
Miscellaneous	...	...	...	...	436
			Total	...	954

## WATER SUPPLY.

There are, in the north of the County, ample sources of water for its entire population if it could only be distributed ; the extreme north forms part of the old Manchester gathering ground, while that portion of the County which projects to the north-west from Glossop to New Mills, forming the High Peak, is a mass of Yoredale and Millstone grits, rising over 2,000 feet above the sea, part of the Pennine Range, and extending down the centre of the County as a gritstone ridge almost as far as Belper. This area of gritstones is the chief source of water in the County ; from it Glossop, Buxton, and Chapel-en-le-Frith have already provided themselves, while Hayfield and New Mills have the waters of the Rowarth and Kinder valleys close at hand ; Castleton has recently obtained a supply from the same source, while from the range which stretches down the middle of the County, Hathersage, Eyam, Baslow, Bakewell, the Matlocks, Belper, and Alfreton gather their water. The ridge not only forms an excellent absorption area, giving up the water again in springs, but from its elevation it causes condensation of the moisture in the air, and a consequent high rainfall. The Chesterfield Rural Sanitary Authority have a gathering ground of 2,200 acres on this range, with a collectable rainfall of 15 inches, yielding, when sufficient storage is constructed, two million gallons a day ; here, too, the Chesterfield Water Company proposed to acquire a fresh gathering ground of 1,100 acres with a collectable rainfall of  $11\frac{1}{2}$  inches.

The districts formed by and abutting on the gritstones are well supplied with water, but the tract to the east is formed of the coal measures, and, except as referred to above, and in the case of the Clay Cross and South Chesterfield districts, the water supplies are deficient in quantity and of indifferent quality ; this is particularly the case with the Borough of Ilkeston, at Heanor, Ripley, South Wingfield, Heage, Codnor, &c. A communication has been addressed to all the Authorities on the south of this area, suggesting that they should unite with the view of getting an opinion from an Engineer upon the practicability of obtaining water from the Meerbrook Sough above Whatstandwell.

To the west of the gritstone ridge, stretching from Castleton, down as far as a line drawn from Wirksworth to above Ashbourne, is an area of mountain limestone. This district is, with the exception of a few places like Tideswell and Chelmorton, almost entirely dependent upon the rainfall collected in meres ; only in the very wet season are small brooks to be seen, as the rain rapidly disappears down crevices in the rock. This area chiefly comes under the Bakewell and Ashbourne Rural Sanitary Authorities. The Public Health Committee have called the atten-

tion of the former Authority to many millions of gallons of water, of singular purity, running to waste each day from an old lead mine (the Magpie), suggesting that an Engineer should be consulted to ascertain whether it is practicable for this water to be forced over the district by means of a ram or a turbine.

The southern portion of the County is almost entirely formed of the Keuper Marls; there is an area of Bunter Sandstone at Ashbourne, however, into which, under the advice of Professor Boyd Dawkins, a well is being sunk for the supply of that district. There is another area on the south of the Trent around Repton, Bretby, and Foremark, and it is in the hopes of collecting the water falling on this area in its passage to the Trent, that the Swadlincote Local Board propose to tap the Trent gravels; whether they will succeed without drawing the Trent water is a matter open to some doubt. There is also on the south of the Trent an area of millstone grit; this has been tapped by the Long Eaton Board by sinking a well at Stanton.

The Rivers Pollution Commission in 1874 classified waters in respect of their wholesomeness in three groups, namely: wholesome, suspicious, and dangerous. The wholesome waters are spring waters, deep well waters, and upland surface waters; the suspicious ones are stored rain water, and surface water from cultivated land; while those they regarded as dangerous are river water to which sewage gains access, and shallow well waters. According to this classification, which is generally accepted, the water supplies of the Urban Sanitary Districts group themselves as follows:—

#### DANGEROUS.

<i>Shallow Well Waters.</i>	<i>River Waters to which Sewage gains access.</i>
Alvaston and Boulton.	Ilkeston. The water is partly taken from the Nut Brook which receives the sewage of Stanley; it is, however, filtered before being distributed.
Ashbourne.	
Brampton and Walton, except Holy Moor Side.	
Heage.	
Heanor, in part.	
Long Eaton, partly, until the new water is laid on.	
Swadlincote, in part.	

## SUSPICIOUS.

<i>Surface Water from Cultivated Land.</i>	
Alfreton, in small part.	
Chesterfield, Newbold, and Whittington (Chesterfield Water Co.), in part.	$\frac{2}{3}$ of gathering-ground manured with cattle droppings and farm-yard manure. The supply is inadequate.
Clay Cross      ...      ...      ...	The water is filtered.
New Mills      ...      ...      ...	Supply is also insufficient.
North Darley.	
South Darley.	
Bonsall.	

## WHOLESOME.

<i>Upland Surface Water and Springs.</i>	<i>Deep Well Waters.</i>
Alfreton.	Heanor. Supply is insufficient, well is sunk in the coal measures, and the water is filtered.
Bakewell.	
Baslow and Bubnell.	
Belper; but the supply is insufficient.	
Buxton. Further storage is required and is being made.	Ilkeston. In part obtained from an old coal working.
Chesterfield, Newbold, and Whittington (supplied by Chesterfield Gas and Water Co.), supply is altogether insufficient.	Long Eaton. The well is sunk in the Millstone grit at Stanton.
Dronfield (from Chesterfield Rural Sanitary Authority's Mains). Further storage required.	Ripley.
Fairfield. The supply is inadequate.	Swadlincote. In part only.
Glossop.	
Matlock. The supply is given in the River Pollution Commissioners' Sixth Report as 73,000 gallons a day, and as insufficient. A water diviner was employed recently, in the hope of discovering fresh springs.	
Matlock Bath. An ample supply has now been obtained.	
Wirksworth. Increased storage is required.	

The Rivers Pollution Commissioners, in their Sixth Report, published in 1874, in reference to the water supplied by the Chesterfield Gas and Water Co., write on page 330—"Our analysis given at page 53 shows this water to be considerably contaminated with organic matter, some of which is of animal origin. It would be much improved in palatability by efficient sand filtration, but would still continue to be of suspicious quality."

This is the water that the Corporation of Chesterfield is about to purchase, and that Filter-beds ought to be constructed should be taken into consideration in fixing the price to be paid for the works.

Since the Public Health Act was passed in 1875, the Sanitary Authorities of the County have obtained the sanction of the Local Government Board to borrow about £310,000 for water-works purposes; of this sum, £136,000 was applied for by Rural Authorities, and £173,000 by Urban Authorities. It is not to be understood that this amount has been actually expended, but merely that schemes have been prepared and approved of by the Local Government Board, which, when completed, would cost that sum. The loans tabulated on a subsequent page as being granted during 1892 are not included. There is still, however, a large amount of work to be done. Perhaps the most important undertaking that is now before any of the Authorities is that of the Chesterfield Rural Sanitary Authority for providing increased storage. Some years ago the Sanitary Authority was recommended by Mr. Eaton to build a Reservoir capable of holding 70,000,000 gallons. Intimately involved with this question is that of the water supply of the Borough of Chesterfield. The Bill promoted by the Chesterfield Water Company, which was opposed by the County Council at the suggestion of the Public Health Committee, was thrown out upon the understanding that the Corporation would promote a Bill to take over the works themselves.

On the opposite page is a Table of the charges for water within the County:—

#### RIVER POLLUTION AND SEWAGE PURIFICATION.

From the time of the passing of the Public Health Act in 1875 up to the end of 1892, the Local Government Board sanctioned loans amounting to £144,000 for sewerage and sewage purification purposes within the Administrative County. Of this sum, £123,000 was applied for by the Urban Districts. The rest was applied for by the following Rural Districts:—Chesterfield, £20,000; Mansfield, £11,000; Shardlow, £3,200, for Draycott; Burton-on-Trent, £1,200, for Church Gresley; and £3,000 for Repton, which has not been spent.

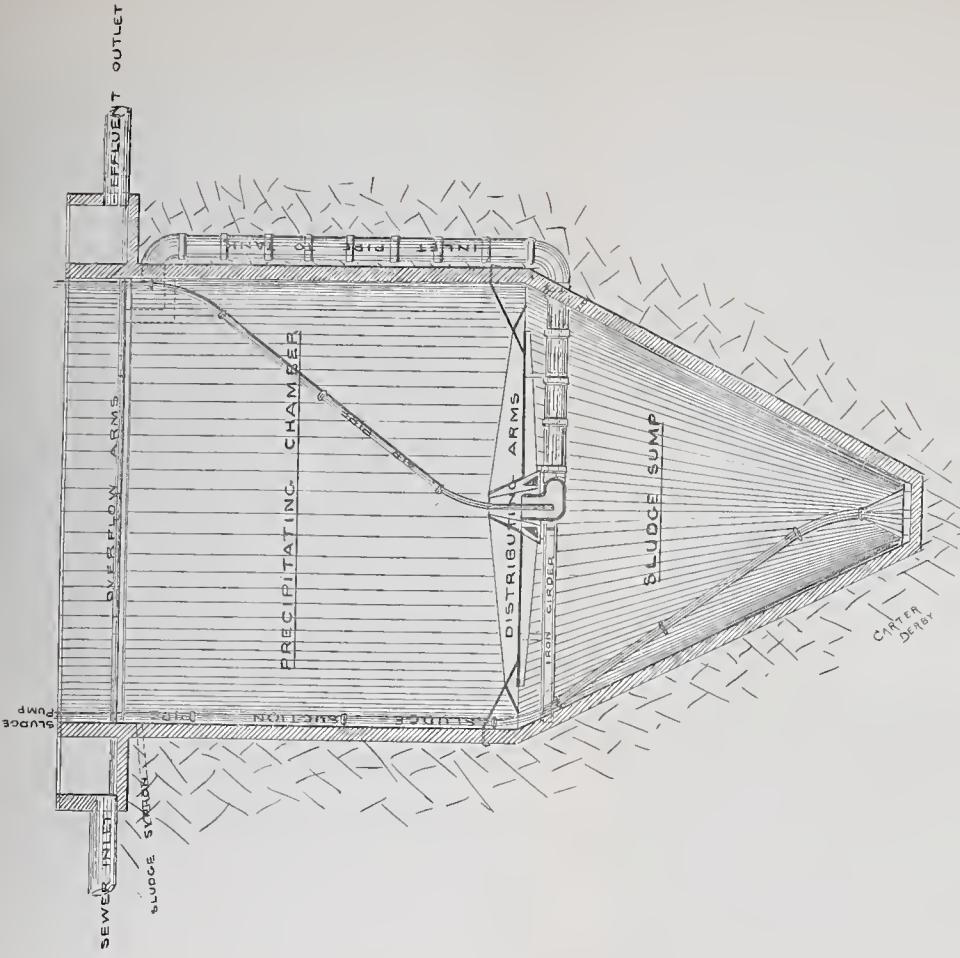
During the last year a great advance has been made by the introduction of upward flow precipitating tanks on the Dortmund principle. These tanks permit of the precipitated sludge being removed without the tank being emptied, thus rendering precipitation possible in the smallest district. The prints on the opposite page represent the Ives' tanks and the Candy tanks ; the former are now at work at Alfreton, Cromford, and Ilkeston, and the latter at Langwith and Glapwell. The advantage this form of tank has over the old-fashioned flat-bottomed tank is, that the sludge can be removed without first pumping out the sewage.

In order to demonstrate the improvement in the condition of the rivers of the County which results from the various Sewage Purification schemes now in progress in different parts of the County, I have commenced to make systematic analyses of the rivers, the samples being collected by the County Sanitary Inspector periodically at certain definite points. Unfortunately, owing to the illness of the Inspector, I have been obliged to stop the series ; but the results already obtained are sufficient to serve as an index of the present condition of the rivers for comparison in future years.

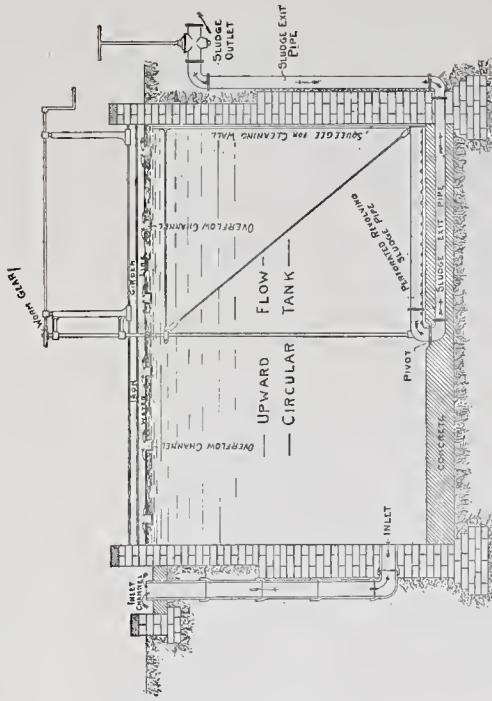
The best way of describing the present position of the Sanitary Authorities in regard to the question of sewage purification is to take the County in watersheds. There are six main watersheds in the County : the Derwent watershed, with an area of about 271,500 acres and a population of 150,000, not including the Borough of Derby, which has a population of 100,000 ; the Rother, including the tributaries of the Sheaf, having a drainage area of about 67,000 acres, and a population of 110,000 ; the Goyt and Etherow watershed, having an area of 51,000 acres, and a population of 45,000 ; the Erewash watershed, with an area of 29,000 acres, and a population of 67,000 ; the Dove, with a drainage area of 91,000 acres, and a population of 20,000 ; and the Trent proper, into which an area of 86,000 acres, with a population of 25,000, drains. In addition to this area, the north-east corner of the County, forming part of the Worksop and Mansfield Rural Sanitary Districts, drains into the Trent through Nottinghamshire. This area is 21,000 acres, and has a population of 10,000. By far the greater part of the population of the Rural Districts does not pollute the Rivers, the sewage being drained into tanks, and put upon the surface of the land.

### THE DERWENT WATERSHED.

The condition of the water in the river Derwent is broadly shown in the following Table, which gives the mean values of thirty-eight weekly analyses of the Derwent above and below Derby made during 1894, and five analyses made from March to



THE IVES TANK.



SECTION OF SELF-CLEANSING CIRCULAR TANK  
THE CANDY TANK.



August in 1893, the samples being collected as nearly as possible at the same time ; other analyses of the river above Matlock, and at Draycott Ferry, five miles below Derby, are introduced for the sake of comparison.

MEAN OF ANALYSES OF RIVER DERWENT.

Point of Collection.	No. of Analyses.	Parts per 100,000.			
		Solid Matter.	Combined Chlorine.	Free Ammonia.	Albuminoid Ammonia.
Above Matlock Bridge	4	...	1·8	·003	·006
Above Derby ...	43	22·0	1·8	·006	·011
Below Derby ...	43	26·5	2·2	·035	·026
At Draycott ...	4	...	2·2	·036	·019

The Derwent gradually shows an increasing amount of Free and Albuminoid Ammonia until Derby is reached, when the indices of the organic matter in the water are suddenly more than doubled ; to appreciate the full significance of this fact, we must bear in mind the large volume of water which flows down the river.

The following is an outline of the present position of the various

## THE DERWENT

### URBAN SANITARY

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Buxton and Fairfield	7,540	Proper sewers	Precipitation by lime and iron salts.
Bakewell ... ...	2,103 2,748	Only short lengths of sanitary pipe sewers	The sewage is discharged into the Wye between Haddon and Bakewell.
Baslow and Bubnell	864	Rubble ...	The sewage discharges into Derwent above Chatsworth.
North Darley ...	2,179	Houses chiefly scattered ; rubble sewers.	Direct to the brook leading to Derwent.
*Matlock ... ...	5,285	Chiefly sanitary pipe sewers	Direct to Derwent.
*Matlock Bath ...	1,846	Rubble sewers	Part direct to Derwent.
		Scarthin Nick is provided with pipe sewers.	Part is treated by precipitation with alum.
Bonsall ... ...	1,329	Rubble sewers	Sewage goes direct into stream.
South Darley ...	754	Chiefly rubble	A number of houses at Darley Bridge pollute.
Alfreton (part of) ...	3,000	Pipe sewers ...	The sewage discharged into the Oakerthorpe brook.
Clay Cross (part of)	3,000	Pipe sewers ...	Irrigation on about five acres of land.
Heage... ... ...	2,490	Rubble sewers	Sewage empties into a tributary of Amber, and some direct into Derwent.
Belper ... ... ...	10,420	Some pipe sewers.	Sewage empties direct into Derwent.
Wirksworth ... ...	3,751	Rubble sewers	Sewage passes into swallows, and some directly into Ecclesbourne.
Alvaston and Boulton	3,116	Some pipe sewers.	Sewage empties direct into Alvaston brook.
Derby County Borough	100,000	—	Sewage goes direct into Derwent.

districts draining into this river, starting at its source:—

## WATERSHED.

### DISTRICTS.

Action taken by Sanitary Authority with the view of Improving Treatment or Adopting a Purification Scheme and Remarks.

A triplicate series of precipitating tanks have been constructed. A loan has been applied for and granted for the purpose of constructing filters. Mr. Fowler, of Sheffield, has been instructed to prepare a scheme.

No steps yet taken.

No steps yet taken.

A scheme has been prepared by Mr. McCallum, of Manchester.

A scheme prepared by Mr. Parkin has been submitted to the Local Government Board.

\*The County Council communicated with the Local Government Board suggesting that these districts should unite for sewage purification purposes, and the Board has sent back the scheme of Matlock Bath for further consideration.

The construction of an upward flow precipitating; the effluent still requires filtering.

A scheme prepared by Mr. Radford has been submitted to the Local Government Board.

Schemes are being prepared at the demand of the Local Government Board—after complaint by County Council.

No action taken.

A scheme prepared by Mr. McCallum has been submitted to the Local Government Board and at their suggestion a fresh site for works is to be sought. The matter is standing over for the new District Council to deal with. The Authority is waiting for Derby.

Received a report from Messrs. Bramwell and Harris—the County Council have not yet been informed whether the Corporation intend to adopt the scheme propounded.

## THE DERWENT

## RURAL SANITARY

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Chapel-en-le-Frith— Castleton ... .	541	Rubble sewers	Sewage empties into Peakhole water.
Hope ... ..	423	Rubble sewers	“ “ , ” ”
Bakewell— Tideswell ... .	1,936	Rubble sewers	Sewage passes into Wye.
Hathersage ... .	1,210	Rubble sewers	“ “ , ” Derwent.
Cromford ... .	1,052	Pipe sewers ...	Sewage treated by precipitation with alum.
Chesterfield— Ashover ... .	2,353	Rubble sewers	Sewage discharged into swallows.
Morton ... .	750	Sanitary pipe sewers.	Irrigation. Area of land too small.
Stonebroom		Pipe sewers ...	Subsidence in a tank and irrigation. Area of land much too small.
Shirland and Higham	3,694	Pipe sewers ...	Subsidence in tanks; at Higham overflow is upon the land, at Shirland it is into the brook.
Mansfield— S. Normanton ... .	4,192	Pipe sewers ...	In 1879 £2,500 was borrowed for subsidence tanks and irrigation scheme.
Blackwell ... .	3,140	Sanitary pipe sewers	In 1891 £2,500, and in 1893 £700, was borrowed for the sewerage and sewage disposal of this parish by subsidence and irrigation.
Tibshelf ... .	2,679	Pipe sewers ...	In 1879 £1,950 was borrowed for this village. Subsidence and irrigation.
Belper— Duffield ... .	3,000	Chiefly sanitary pipe sewers.	Sewage discharged direct into the river.
Ripley (Marehay)	1,900	Rubble drains	In 1892 £3,700 was borrowed for sewerage and sewage disposal.
Holbrook ... .	1,094	Rubble drains	The sewage is discharged into the Bottle Brook, and indirectly pollutes the Derwent.
Kilbourne ... .	1,427	Rubble drains	
Horsley Woodhouse	934	Rubble drains	
Shardlow— Little Eaton... .	983	Rubble drains	Sewage of about half the village discharged directly into brook.
Spondon ... .	2,208	Some pipe sewers and some rubble	Sewage passes along ditches into Derwent.
Ockbrook ... .	2,166	“ “ pipe sewers	
Draycott ... .	1,032	Sanitary “ pipe sewers	In 1889 £2,700 was borrowed for disposing of the sewage of this village by irrigation.

**WATERSHED—continued.****DISTRICTS.**

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Action taken by Sanitary Authority with the view of Improving Treatment or Adopting a Purification Scheme and Remarks.

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A scheme has been prepared by Mr. Radford.

No steps yet taken.

Nothing done.

The construction of an upward flow precipitating tank.

A scheme has been prepared by the Sanitary Authority, but its adoption has been postponed at request of Parochial Committee.

The Sanitary Authority has instructed its surveyor to report on the disposal of this sewage.

These farms are let to tenants who do not properly divert the sewage.

No steps taken.

A scheme for disposing of the sewage by irrigation is at the present time being carried out.

A scheme was prepared by the Sanitary Authority for Holbrook, but was postponed through the action of the Parochial Committee.

⟩ No action taken.

The Authority has called in Mr. Radford to advise on the means of improving the farm.

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## THE ROTHER WATERSHED.

This river, although nothing like such a large stream as the river Derwent, has a much larger population per acre of gathering ground draining into it; the gathering ground also has a lower average rainfall, the result is that its waters are much more polluted than those of the Derwent. The average of the results obtained by analysing the river Rother at intervals from February till October is as follows:—

### MEAN OF ANALYSES OF RIVER ROTHER.

Point of Collection.	No. of Analyses.	Parts per 100,000.		
		Com-bined Chlorine.	Free Am-monia.	Albumi-noid Am-monia.
Hipper above Chesterfield ...	8	2·4	·021	·014
Rother above Hasland Bridge	10	3·4	·026	·014
Rother below Newbold ...	12	6·5	·190	·099
Rother below Whittington ...	4	3·9	·056	·032

## THE ROTHER

District.	Popula-tion.	System of Sewers.	Present Method of Disposing of Sewage.
Clay Cross ..	4,000	Pipe sewers ...	The sewage is irrigated on some nine acres of land.
Brampton and Walton	2,532	Pipe sewers ...	Intermittent sewage filtration plots have been made at Holymoorside and Cutthorp.
Chesterfield ...	22,009	Pipe sewers ...	28 acres of land have been laid out as intermittent sewage filters, but the area is insufficient without precipitation.
Newbold and Dunston	5,192	Pipe sewers ...	Intermittent filtration on about seven acres of land.
Whittington...	8,798	Pipe sewers ...	Intermittent filtration on about twelve acres of land.
Dronfield ...	3,438	Rubble sewers	The sewage is passed direct into the river Drone.
Bolsover ...	3,662	Pipe sewers ; some rubble drains left	The sewage is discharged into the Doe Lea stream.

The pollution caused by the sewage effluents of Chesterfield and Newbold is very evident from these figures. The Chesterfield Corporation are at present constructing precipitating tanks. After they are in working order, I have no doubt the condition of the river will be much improved. The other Authorities, especially Whittington, are, however, seriously polluting. The fact that the Rother becomes purer below Whittington is due to the dilution of the stream occurring between the points where the samples were collected.

The following is a tabulation of the Sewage Works completed and of those required in this watershed :—

## WATERSHED.

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Action taken by Sanitary Authority with the view of Improving Treatment or Adopting a Purification Scheme and Remarks.

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More attention has been paid to the farm. Alum is being used as a precipitant.

The Authority has started to burn the earth on the Holymoorside filters. The land is the stiffest clay, does not permit of any filtration, and is altogether unsuitable for the purpose of sewage purification.

£5,250 has been borrowed for the purpose of constructing precipitating tanks, sludge pressing machinery, &c., and the work is now in hand.

The land is not worked with sufficient intermittency. Either more land will eventually have to be acquired or precipitation be adopted.

The land is let to a farmer, who, in damp weather, when the crops do not require the sewage, passes it either direct into the stream, or through a limited area of the land which is not cropped. Communications have been sent to the Authority, but no improvement has been effected.

A scheme has been adopted by the Board for precipitating the sewage with salts of iron and alum, and intermittently filtering through polarite. A difficulty has been experienced in obtaining a site for the disposal works, and the matter is standing over to be dealt with by the new District Council.

Nothing has yet been done; the Urban Authority has, however, only recently come into existence.

## THE ROTHER

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
*Chesterfield Rural Sanitary District—Brimington ...	4,034	Pipe sewers ...	There are four outfalls (i.) Staveley Works. (ii.) Dumble, (iii.) Wheeldon Mill, (iv.) Brimington Common.
Eckington ... ...	12,357	Pipe sewers ...	In this parish there are seven outfalls; at six of them the sewage is strained through cinders and gravel, at the seventh it passes direct to Rother.
Staveley ... ..	9,363	Pipe sewers ...	There are six outfalls in this parish—three outfalls into the Doe Lea stream and three into the Rother.
Killamarsh ... ...	3,220	Pipe sewers ...	There are three outfalls in this parish. At Upperthorpe and Westhorpe the sewage is poured upon the surface of the land; at Killamarsh (proper) it merely passes through a strainer and into the Rother.
Hasland ... ...	4,542	Pipe sewers ...	This parish has three main drainage areas—Hasland (proper), Winsick, and Grassmoor.
Tupton ... ...	1,551	Pipe sewers ...	There are four outfalls in this parish; at two the sewage is put upon the land.
Pilsley ... ...	2,328	Pipe sewers ...	The sewage outfall is into a ditch used by cattle to water at.
Unstone ... ...	1,687	Pipe sewers ...	There are three outfalls in this parish. At Apperknowle the overflow from two tanks is upon the surface of the land; at Unstone Green tanks and strainers have been constructed. Besides the above there are a number of other small sewage disposal works.
Mansfield Rural District—Ault Hucknall ...	1,388	Some pipe sewers	The sewage passes upon the land, but at times finds its way into the Doe Lea.
Rotherham Rural Sanitary District—Beighton ... ...	2,852	Rubble drains	The sewage is discharged down the roadside, and down ditches into the Ochre Dyke, which empties into the Rother.

\* It will be seen that the Chesterfield Rural Sanitary Authority have done advised with regard to the construction of their Disposal Works. It cannot be filter is effected by the oxygen of the air in the interstices of the filter, this is again become charged with air. For this reason artificial sewage filters, should

## WATERSHED—continued.

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Action taken by Sanitary Authority with the view of Improving Treatment or adopting a Purification Scheme and Remarks.

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At the first three outfalls mentioned the sewage is allowed to settle in tanks and then strained through cinders; little or no purification is effected.

The strainers do not effect any purification; a comprehensive scheme by an engineer of experience is required for a densely populated district like this.

Similar arrangements to those mentioned above are at work at four outfalls in this parish—the sewage simply stagnates and putrifies in the strainers. A complete scheme for disposing of the sewage of this parish should be prepared by an engineer who has had experience in carrying out sewage purification works. No purification is effected at Killamarsh (proper).

No purification is effected.

The Hepthorn lane outfall is a source of pollution.

The Rural Sanitary Authority propose to lay out about an acre of land for irrigation purposes.

At Unstone Mill and Unstone Green pollution takes place.

The Sheepbridge Colliery Co. have constructed works to treat the sewage from their cottages by the International Process.

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excellent work in providing sewers for their district, but they have been badly too clearly understood that the whole purification brought about by a sewage consumed in a few hours and the filter must be allowed to drain in order to be constructed in triplicate, or at least in duplicate, and be used in turn.

## THE EREWASH WATERSHED.

On the Derbyshire side of this river there is a population draining into it of 67,000. There is also a very large population on the Nottinghamshire side, which pollutes around Eastwood, Asworth, and Greasley. A conjoint scheme for the purification of the sewage of the Eastwood District is now being carried out. The table of analysis opposite shows the polluted condition of this river :—

### THE EREWASH

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Alfreton ... ...	10,000	Pipe sewers ...	At present the sewage discharges either directly or indirectly into the river Erewash, except that discharging on the Swanwick Sewage Farm which empties into the Butterley Reservoir.
Heanor ... ..	9,779	Pipe scwers ...	The sewage of New America and Lea Lane goes direct into Bayley brook. The main outfall of Heanor (proper) is upon seven acres of land, but this is altogether insufficient. At Marlpool and Thorpe Road land is also irrigated, while at Langley Mill and Stacey Fields settling tanks have been made.
Ilkeston ... ...	19,744	Pipe sewers ...	About thirty-three acres of land is used for irrigation and seven acres for intermittent filtration. The sewage from the lower parts of the town passes into the canal and Erewash.
Long Eaton ... ...	9,636	Pipe sewers ...	The sewage is first precipitated by means of alum and lime, and the sludge is pressed by steam; the effluent from the tank is irrigated over about fourteen acres of land, upon most of which osiers are grown.
Mansfield Rural Sanitary District— Pinxton ... ...	2,359	Pipe sewers ...	A large tank has been made to store the sewage in so that it can be applied intermittently to the land, of which there appears to be sufficient.

## MEAN OF ANALYSES OF RIVER EREWASH.

Point of Collection.	No. of Analyses.	Parts per 100,000.		
		Com-bined Chlorine.	Free Am-monia.	Albumi-noid Am-monia.
Above Pinxton ... ...	12	11·0	·010	·013
Below Ilkeston ... ...	16	15·6	·188	·043
Below Stapleford & Sandiacre	12	15·1	·083	·062

The position of the Derbyshire Authorities in this watershed is given below:—

## WATERSHED.

## Action taken by Sanitary Authority with the view of Improving Treatment or adopting a Purification Scheme and Remarks.

The Board have adopted a scheme for dealing with the sewage at four different outfalls, and since submitting the scheme to the Local Government Board have decided to precipitate with alum in a tank constructed on the Dortmund principle. After carefully examining the land it was proposed to irrigate, I can commend this course.

A serious pollution is taking place at all these outfalls. The Authority has not yet intimated to the County Council what steps they intend to take to efficiently purify their sewage.

The Borough Surveyor has prepared plans for precipitating the sewage before applying it to the land: also for dealing with the sewage, which does not come to the farm, by precipitation and artificial filtration. Some money ought also to be spent in constructing sewage carriers along the contour lines on the farm, and in an arrangement for applying the sewage intermittently to the land.

The tank effluent should be diverted on the land more frequently, the arrangements then would be satisfactory.

The sewage is not applied with sufficient care; the arrangement would work well if properly attended to.

## THE EREWASH

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Basford Rural Sanitary District— Codnor & Loscoe...	3,848	Rubble drains	The sewage discharges into the nearest ditch and then into the brook.
Codnor Park ...	1,077	Pipe sewers ...	The sewage of the village is discharged direct into the brook.
Shardlow Rural Sanitary Authority— Stanley ... ...	1,000	Some pipe sewers	The sewage passes into the Stanley brook above the intake of the Ilkeston Waterworks.
Sandiacre ... ...	2,256	Some pipe sewers	The sewage is discharged direct into the Erewash.

## THE GOYT AND

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Glossop ... ...	22,414	Some pipe sewers.	The sewage discharges direct into Glossop brook.
Glossop Rural District— Ludworth and Chisworth	2,238	Rubble drains	The sewage at the present time passes direct into the river Goyt.
Chapel-en-le-Frith Rural District— Chapel ... ...	4,647	Pipe and rubble sewers.	The sewage at the present time passes direct into the Smithy and Black brooks.
Whaley Bridge ...	1,200	Some pipe sewers.	The sewage is discharged direct into the river Goyt.
New Mills ... ...	6,661	Rubble sewers with some pipe.	The sewage discharges direct into the river Goyt and Sett brook.
Hayfield Rural ...	3,952	Rubble sewers.	The sewage passes direct into the Sett brook.

## THE DOVE

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Ashbourne ...	3,810	Rubble sewers	The sewage is discharged direct into the Henmore brook.
Ashbourne Rural Sanitary District— Hartington ...	400	Rubble sewers	The sewage is discharged into a ditch which empties into the river Dove.

There are several other villages in the Ashbourne Rural District which

## WATERSHED—continued.

Action taken by Sanitary Authority with the view of Improving Treatment or adopting a Purification Scheme and Remarks.

The Sanitary Authority prepared a scheme for disposing of the sewage by irrigation. The land it was proposed to take was very heavy. The Local Government Board have sent the scheme back to the Authority for further consideration.

The Authority has not yet informed the County Council what they propose to do to abate the pollution.

Ditto

ditto.

## ETHEROW WATERSHED.

Action taken by Sanitary Authority with the view of Improving Treatment or Adopting a Purification Scheme and Remarks.

The Corporation have consented to have an Order of the County Court made against them to carry out purification works within a specified time, and they have since adopted a scheme for dealing with their sewage by the International Process—precipitation with alum and iron salts, and intermittent filtration through polarite.

The Rural Sanitary Authority have informed the County Council that it is their intention to carry out a purification scheme forthwith.

A scheme for disposing of the sewage by precipitation and subsequent irrigation is now before the Local Government Board.

The Authority is waiting to get the Chapel scheme finished before commencing with Whaley Bridge.

At the instance of the Mersey and Irwell Joint Board an Order of the County Court has been made for this Authority to carry out a sewerage scheme within twelve months, the Joint Board undertaking that if satisfied with the progress made at the end of twelve months, they would not take the case into court again.

An engineer has been instructed to prepare a scheme for the disposal of the sewage of this township.

## WATERSHED.

Action taken by Sanitary Authority with the view of Improving Treatment or Adopting a Purification Scheme and Remarks.

indirectly pollute the Dove. This is also the case in the Uttoxeter Rural District.

## THE TRENT

District.	Population.	System of Sewers.	Present Method of Disposing of Sewage.
Swadlincote ...	13,889	Chiefly pipe sewers	The sewage at the present time is discharged into the Gresley brook.
Ashby Rural Sanitary District— Measham ...	1,600	Pipe sewers ...	The Sewage discharges direct into the river Mease.
Woodville ...	1,500	Rubble drains	The sewage is discharged direct into the Hartshorne brook, causing a serious nuisance.
Donisthorpe ...	1,000	Rubble drains	The sewage is discharged direct into a tributary of the river Mease.
Burton Rural Sanitary District— Repton ...	1,783	Some pipe sewers.	The sewage is discharged direct into the Repton brook by a number of separate outfalls.
Etwall (600), Willington (500), Newton Solney (500), Linton Heath (700), which either directly or indirectly pollute			
Shardlow Rural Sanitary District— Melbourne ...	3,000	Pipe sewers ...	The sewage is disposed of by irrigation on about nine acres of land.
Indirectly draining into the Trent through the river Meden are a the chief of			
Mansfield Rural Sanitary District— Pleasley ...	1,499	Rubble sewers	The colliery villages in these parishes indirectly pollute the Meden.
Scarcliffe ...	1,100		
Langwith ...	300	Pipe sewers ...	The Sheepbridge Colliery Co. have erected works to treat the sewage by the International Process.
Worksop Rural Sanitary District— Clown ...	2,000	Pipe sewers ...	The sewage is disposed of by irrigation.
Elmton ...	600	Rubble sewers	{ The sewage discharges direct into brook.
Whitwell ...	1,900	Rubble sewers	

## WATERSHED.

Action taken by Sanitary Authority with the view of Improving Treatment or Adopting a Purification Scheme and Remarks.

The Board have adopted a scheme of sewage purification, and the Inquiry of the Local Government Board with regard to the acquisition of the land has been held.

A sewage disposal scheme was adopted by the Sanitary Authority and approved of by the Local Government Board, but has never been carried out.

Notices under "The Rivers Pollution (Prevention) Act" have been served upon this Authority by the County Council, but they have not been followed up. The Authority has had a scheme prepared for twelve months. No action has been taken by the Authority.

A scheme was prepared for the disposal of the sewage of this village about twelve years ago, but it has not been carried out.

and a number of other villages—such as Walton, Findern, and Rosliston—the Trent, and require disposal schemes.

If the farm were worked by the Board themselves the sewage would be efficiently purified.

number of villages in the Worksop and Mansfield Rural Districts; these are:—

Sewerage schemes ought to be carried out.

Scheme worki

A sewerage scheme has been designed by Mr. Radford.

Sewerage schemes should be carried out in these villages.

It will be seen that the Borough of Chesterfield, the chief Authority on the Rother watershed, has, in addition to the works completed some years ago, precipitating tanks and sludge pressing machinery in the course of construction. The Borough of Ilkeston, the chief Authority on the Erewash watershed, has already applied to the Local Government Board for a loan for precipitating tanks, and has a complete scheme in hand. Glossop, our third Borough, has consented to an Order of the Court being made against it to carry out works within twelve months; but, on the Derwent watershed, the chief polluter, the County Borough of Derby, with its population of 100,000, equal to nearly one quarter of that of the Administrative County, has not yet given any undertaking to complete its works within any time. Altogether, there are some fifty sewage disposal works in the County; there are thirteen schemes in different stages of preparation and construction, and about fifty more are required, as well as improvements in the present works. There are also in the County fifty-six manufacturing pollutions of various sorts: in nearly all these cases settling tanks are being put down, and arrangements are being made to strain the effluent through engine ashes: in this way the solid matter in suspension will be arrested. A great improvement in the rivers of the Goyt and Etherow watershed is being effected by the manufacturers keeping out their engine ashes; the enormous extent to which ashes were thrown into the rivers is apparent now from the heaps of cinders which have accumulated during the last few years, since the practice has been stopped.

### BYE LAWS AND REGULATIONS.

During 1892, Bye Laws for the proper management of Cemeteries, drawn up by the Corporation of Ilkeston, were approved of by the Local Government Board.

The Urban powers of the 161st section of the Public Health Act were conferred upon the parish of Codnor and Loscoe: this enables the parish to contract for the lighting of its streets. Urban powers under the Public Health (Buildings in Streets) Act, 1888, were conferred upon the Special Drainage District of Duffield.

### LOCAL SANITARY LEGISLATION.

The Buxton Local Board and the Uttoxeter Rural Sanitary Authority obtained Local Acts during 1892, and a Provisional Order was made for the purpose of forming a Joint Hospital District of the Tamworth Rural Sanitary District and the Borough of Tamworth in Staffordshire. The Uttoxeter Act was to enable the Sanitary Authority to obtain a supply of water at Somersall Herbert for

Uttoxeter. Through the action of the Public Health Committee a free supply of water was obtained for the houses within a certain radius of the springs, and a clause giving the Derbyshire villages the power to buy it in bulk for domestic purposes at eightpence a thousand gallons. The works cost about £3,000, while the cost of the Act was £2,000. The present method of enquiry by a Parliamentary Committee is exceedingly costly, and the work could be done more efficiently at less cost in the locality by Committees of the County Councils.

### LOANS FOR SANITARY AND OTHER PUBLIC IMPROVEMENTS.

The following loans were sanctioned by the Local Government Board during 1892 :—

Urban Authorities.	Purpose.	Period in years.	Amount. £
Alfreton ...	Water Supply ...	... 30 ...	700
Ashbourne	Street Improvement ...	... 20 ...	400
Buxton ...	Sewerage and Surface Drainage	30 ...	463
„ „	Water Supply ...	... 30 ...	630
„ „	Street Improvement ...	... 20 ...	190
„ „	” ” ”	... 10 ...	2,000
„ „	Public Walks and Pleasure Grounds ...	... 18 ...	485
„ „	Depôt ...	... 30 ...	350
„ „	Gas Works purposes ...	... 30 ...	312
„ „	” ” ”	... 10 ...	444
„ „	Water Carts and Steam Road Roller ...	... 10 ...	432
Chesterfield	Land for Street Improvement	50 ...	1,000
Long Eaton	Water Supply ...	... 30 ...	14,000
Matlock Bath and Scarthin Nick }	Water Supply ...	... 30 ...	1,300
New Mills	Purchase of Gas Undertaking	30 ...	11,000
„ „	Gas purposes ...	... 30 ...	2,550
„ „	” ” ”	... 15 ...	1,450
North Darley	Water Supply ...	... 25 ...	280
Rural Authorities.			
Belper ...	Duffield Water Supply	... 30 ...	490
„ „	Ripley Sewerage and Sewage Disposal (Marehay)	... 30 ...	3,700
Mansfield	Blackwell Sewerage and Sewage Disposal	... 30 ...	700
„ „	Pinxton Sewerage and Sewage Disposal	... 30 ...	650

Loans were, it will be seen, sanctioned for borrowing £43,500, of which nearly £38,000 was borrowed by the Urban districts.

## NUMBER OF TENEMENTS WITH ONE, TWO, AND THREE ROOMS.

I have extracted the following information from the Census returns, in the hope that it will be useful to the Local Authorities and to their Medical Officers of Health. It will be seen that at Ashbourne 30 % of the tenements have less than four rooms. The table also gives the number of inhabited houses; this figure must be looked to in drawing any conclusions from the percentages given. The table is valuable as indicating where overcrowding is likely to be met with.

Table giving the number of Tenements with one, two, and three rooms, in the various Sanitary Districts, and the number of persons in the rooms on Census day, 1891.

### URBAN SANITARY DISTRICTS.

(In the "Census Instructions" a tenement is described as any house or part of a house separately occupied by owner or tenant.)

Name of District.	Rooms in Tenements.	No. of Occupants of Tenements.								No. of Tenements with less than 4 rooms.	Percentage of Tenements with less than 4 rooms.
		1	2	3	4	5	6	7	8 or more		
ALFRETON.	1	7	1	1	...	...	...	...	...	9	10 %
	2	27	53	35	25	12	7	3	3	165	
	3	9	28	23	21	20	14	13	10	138	
Total tenements, 3,100.											
Inhabited houses, 2,979.											
ALVASTON AND BOULTON.	1	1	...	...	...	...	...	...	...	1	4.6 %
	2	4	3	5	...	2	1	...	...	15	
	3	2	1	5	2	2	1	...	1	14	
Total tenements, 658.											
Inhabited houses, 647.											
ASHBOURNE.	1	8	4	1	...	...	...	...	...	13	30 %
	2	26	35	26	17	8	6	2	3	123	
	3	8	20	14	12	4	12	19	11	110	
Total tenements, 807.											
Inhabited houses, 801.											
BAKEWELL.	1	1	...	...	...	...	...	...	...	1	20 %
	2	16	8	3	2	1	1	...	2	33	
	3	2	9	10	12	13	9	7	6	68	
Total tenements, 512.											
Inhabited houses, 502.											
BASLOW & BUBNELL.	1	...	...	...	...	...	...	...	...	...	12 %
	2	1	1	4	4	1	...	...	...	11	
	3	1	1	1	3	2	1	...	2	11	
Total tenements, 177.											
Inhabited houses, 168.											
BELPER.	1	7	4	...	...	...	...	...	...	11	18 %
	2	32	71	40	26	17	10	6	1	203	
	3	11	26	33	27	23	22	14	17	173	
Total tenements, 2,109.											
Inhabited houses, 2,104.											
BONSALL.	1	...	...	...	...	...	...	...	...	...	17 %
	2	6	6	9	6	1	1	...	...	29	
	3	3	8	2	3	4	1	..	..	21	
*BRAMPTON AND WALTON.	1	2	1	2	1	1	...	...	1	8	7 %
	2	9	10	10	10	7	2	1	2	51	
	3	8	18	8	7	6	8	3	3	61	

\* Before the extension of Chesterfield.

## URBAN SANITARY DISTRICTS—continued.

Name of Districts.	Rooms in Tenements.	No. of Occupants of Tenements.								No of Tenements with less than 4 rooms.	Percentage of Tenements with less than 4 rooms.
		1	2	3	4	5	6	7	8 or more		
BUXTON.	1	6	...	...	...	...	...	...	...	6	6 %
	2	6	16	11	5	7	...	1	2	48	
	3	2	8	5	6	5	3	5	4	38	
*CHESTERFIELD.	1	4	3	3	1	...	...	...	1	12	16 %
	2	24	46	35	23	15	6	5	3	157	
	3	11	49	38	28	34	33	26	29	248	
CLAY CROSS.	1	1	1	2	...	...	...	...	...	4	12 %
	2	5	24	23	21	9	7	7	4	100	
	3	2	5	14	17	12	6	10	6	71	
DRONFIELD.	1	...	...	...	...	...	...	...	...	...	6 %
	2	5	9	5	1	1	2	...	1	24	
	3	3	5	7	6	1	2	1	1	26	
FAIRFIELD.	1	20	4	1	1	...	...	...	...	26	21 %
	2	6	17	13	7	3	6	1	...	53	
	3	4	6	7	5	5	4	...	3	34	
GLOSSOP.	1	3	3	...	1	...	...	...	...	7	9 %
	2	30	66	45	28	16	10	4	2	201	
	3	16	66	57	25	17	16	12	12	221	
HEAGE.	1	...	...	...	1	...	...	...	...	1	20 %
	2	16	14	9	7	4	...	1	1	52	
	3	3	10	13	4	12	3	7	3	55	
HEANOR.	1	2	...	...	...	...	...	...	...	2	10 %
	2	20	23	23	15	10	9	3	1	104	
	3	3	16	15	16	14	8	9	8	89	
ILKESTON.	1	10	2	2	...	...	...	...	...	14	10 %
	2	15	65	58	25	12	10	4	2	191	
	3	4	43	35	42	34	25	15	9	207	
LONG EATON.	1	2	2	...	1	...	...	...	...	5	3 %
	2	16	12	4	...	...	...	...	...	32	
	3	1	6	5	2	2	1	1	1	19	
MATLOCK.	1	1	...	1	...	...	...	...	...	2	12 %
	2	13	18	10	8	8	2	...	...	59	
	3	6	15	10	9	8	6	5	9	68	
MATLOCK BATH AND SCARTHIN.	1	3	...	1	...	...	...	...	...	4	16 %
	2	3	5	9	4	3	1	...	...	25	
	3	3	6	8	8	5	3	1	4	38	
*NEWBOLD AND DUNSTON.	1	1	...	1	...	...	...	...	...	2	5 %
	2	4	10	8	3	10	6	1	1	43	
	3	...	6	7	5	1	...	2	3	24	

\* Before the extension of Chesterfield.

## URBAN SANITARY DISTRICTS—continued.

Name of District.	Rooms in Tenements.	No. of Occupants of Tenements.								Percentage of Tenements with less than 4 rooms.
		1	2	3	4	5	6	7	8 or more	
NEW MILLS.	1	6	...	1	...	...	...	...	...	7
	2	17	6	20	5	8	3	3	2	74
	3	7	22	17	9	15	6	5	5	86
NORTH DARLEY.	1	1	...	...	...	...	...	...	...	1
	2	7	9	9	6	2	1	1	1	36
	3	2	7	8	5	5	4	3	1	35
RIPLEY.	1	...	...	...	...	...	...	...	...	...
	2	10	12	10	5	4	1	...	2	44
	3	1	7	4	8	3	5	3	4	85
SOUTH DARLEY.	1	...	...	...	...	...	...	...	...	...
	2	2	4	2	2	...	...	...	...	10
	3	1	...	...	2	2	1	1	2	9
SWADLINCOTE.	1	...	...	...	...	...	...	...	...	...
	2	6	3	3	1	1	...	1	1	16
	3	...	5	6	7	2	3	3	...	26
WHITTINGTON.	1	...	...	...	...	...	...	...	...	...
	2	7	15	7	19	3	1	2	1	55
	3	3	14	23	21	13	6	10	12	102
WIRKSWORTH.	1	...	...	...	...	...	...	...	...	...
	2	29	18	12	10	5	4	2	2	82
	3	12	19	29	23	16	12	12	5	128
28 URBAN DISTRICTS.	1	86	26	16	5	2	...	1	...	136
	2	362	89	448	285	170	97	48	37	2,036
	3	130	437	410	387	288	217	188	167	2,174
										4,346
										11 %

5·3 per cent. of the tenements in the Urban districts have only 1 or 2 rooms.  
 11      "      "      "      "      "      "      "      "      less than 4 rooms.

## RURAL SANITARY DISTRICTS.

Table giving number of Tenements with one, two, and three rooms, in the Rural Districts.

	Total Tenements.	No. with less than 4 rooms.	No. with 1 room.	No. with 2 rooms.	No. with 3 rooms.	Percentage of Total No. of Tenements.
ASHBOURNE ... ...	2,672	418	8	178	281	15 %
ASHBY-DE-LA-ZOUCH ...	1,498	246	3	83	160	16 %
BAKEWELL ... ... ..	4,167	850	14	336	500	20 %
BASFORD ... ... ..	1,093	112	3	35	73	10 %
BELPER ... ... ..	4,771	574	7	236	331	12 %
BURTON-ON-TRENT ...	3,759	507	26	183	302	13 %
CHAPEL-EN-LE-FRITH ..	2,816	268	4	116	148	9 %
CHESTERFIELD ... ...	11,758	1,594	27	741	826	13 %
DERBY ... ... ..	188	33	...	5	28	17 %
ECCLESALL BIERLOW ..	1,670	334	4	101	229	20 %
GLOSSOP ... ... ..	951	67	...	28	39	7 %
HAYFIELD ... ... ..	860	51	...	22	27	6 %
MANSFIELD ... ... ..	3,059	411	3	154	252	13 %
SHARDLOW ... ... ..	5,480	647	14	213	419	11 %
UTTOXETER ... ... ..	549	74	4	28	41	13 %
WORKSOP ... ... ..	1,260	237	9	81	145	18 %
	46,551	6,423	126	2,540	3,751	13 %
PERCENTAGE OF TENEMENTS } IN RURAL DISTRICTS. }	...	13·7	·27	5·4	8·0	

## PART II.

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### THE DISTRICTS SEPARATELY.

#### URBAN SANITARY DISTRICTS.

##### ALFRETON.

Medical Officer of Health, E. GAYLOR, L.R.C.P.

Area in Acres, 4,625.	Estimated Population, 15,700.
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Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
17·6.	38·8.	2·1.	157.

*Action taken with regard to Infectious Diseases.* Ten cases of Small Pox occurred in this district during the year. Disinfectants were freely used, the bedding, &c., was destroyed, and the houses disinfected by the Inspector. There were seven cases of Diphtheria and Membranous Croup, five of which proved fatal. Typhoid Fever caused two deaths, eighteen cases having occurred. In discussing the cause of this, the Medical Officer of Health calls attention to the complaints that were common of foul emanations from the open sewer ventilators in the streets, and advocates the use of more ventilating shafts carried above the houses; defective sewer ventilation was referred to in the report for last year. This Authority has made an application to the County Council to hold an enquiry under the Isolation Hospitals Act as to the necessity for a Joint Hospital for this and the neighbouring district. The disinfection of premises after Scarlet Fever is not properly attended to: there is no disinfecting apparatus, consequently, wearing apparel, bed linen, &c., which have been in the sick room, remain without disinfection; the infected rooms are not fumigated, and the paper is not removed from the walls. Dr. Gaylor recommends that one of the employees of the Board should, under the supervision of the Inspector, disinfect the houses after every case of infectious disease.

*General Sanitation.* The water supply ran rather short at the end of the drought: the Authority contemplates sinking a twelve-inch borehole at Lindway, into the millstone grit. Plans have been prepared and submitted to the Local Government Board for disposing of the sewage of the district. The land which it is proposed to take is very stiff, and unless the Authority first

precipitates, I do not think the schemes will prove successful. The scavenging of the district, although done by the Board, is far from being satisfactory. The Medical Officer asks that a Bye-Law should be adopted fixing the distance that the Board will insist on, for pigs being kept from dwelling houses; if the Board adopted some distance, such as sixty feet, it would be of the greatest assistance to their officers in abating this objectionable form of nuisance.

*Further Sanitary Requirements.* As mentioned in my summary for last year, the sanitary requirements of this district are: (i.) A system of sewage disposal. (ii.) An Infectious Diseases Hospital and steam disinfecter in conjunction with neighbouring Authorities. (iii.) The disinfection of premises after infectious disease by a servant of the Board. (iv.) Improvement in scavenging the district, especially that of Somercotes.

### ALVASTON AND BOULTON.

Medical Officer of Health, W. H. WRIGHT, M.R.C.S.

Area in acres, 2,155. Estimated Population, 3,670.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14.7.	38.6.	1.9.	119.

*Action taken with regard to Infectious Diseases.* There were eleven cases of Membranous Croup in this district, and five deaths. The Medical Officer attributes the disease to the foul emanations from the sewers: there were also during the year fourteen cases of Typhoid Fever, which were put down to the same cause. These outbreaks were chiefly confined to New Town. At Allenton there was an outbreak of Impetigo (a contagious pustular disease of the skin), due in a large measure to there not being an adequate supply of pure water. The Medical Officer still visits the Board Schools each month to ascertain the prevalence of disease amongst the children. The report does not state how the disinfection is done after cases of Infectious Disease.

*General Sanitation.* The water supply of the district is wholly derived from surface wells, and is dangerously liable to become polluted. In the event of the Borough of Derby ever obtaining additional sources of water above Derby, this district should be supplied upon the same terms as the people of Derby; in dry seasons, Derby obtains its water direct from the Derwent, but as the sewage of Derby is poured into the river just above Alvaston it is impossible for the district to obtain its water from the same source, however efficiently it might be filtered.

*Further Sanitary Requirements.* (i.) An adequate supply of pure water. (ii.) A system of sewage disposal. (iii.) The provision of an Isolation Hospital in conjunction with neighbouring Authorities.

**ASHBOURNE** (exclusive of Workhouse).

Medical Officer of Health, P. R. LITTLETON, M.R.C.S.

Area in Acres, 572. Estimated Population, 3,852.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
19.7.	26.4.	1.8.	203.

*Action taken with regard to Infectious Diseases.* This year has been a memorable one for Ashbourne on account of the outbreak of Cholera in September. During the year there were thirteen cases and eight deaths from Cholera, and eight deaths from Typhoid and Diarrhoea, yielding a total death rate of 4.1 per 1,000. The Cholera was traced to the well in the "Coach and Horses" yard. Mr. Littleton had the sucker of the pump removed: this step alone prevented a widespread outbreak in Ashbourne, for the water was used by a large number of people. The well water was examined bacteriologically by Dr. Klein, who found in it the comma-shaped bacilli, which have a peculiar method of growing, and have not yet been found except in conjunction with true Asiatic Cholera. It was clearly shown that the well was polluted by drainage from a closet at the public-house. This house was frequented by tramps, and was, in fact, one of the worst kind of Common Lodging-houses. A number of persons from Cholera-infected places came into Derbyshire. Although the Local Government Board endeavoured to warn the Local Medical Officers of the whereabouts of such cases, the addresses sent were imperfect, and it is very probable that some mild case came to Ashbourne without the knowledge of the Authorities. To prevent the disease spreading, besides the pump handle being taken off, the well water was disinfected, pails were purchased for the collection of infected excreta, and this matter was removed, thoroughly disinfected, and then either burnt or buried. These pails are now being used for collecting Typhoid excreta. The Medical Officer calls attention to the great necessity for a Hospital to isolate the first cases of infectious disease.

*General Sanitation.* The Authority is sinking a deep well in the Bunter sandstone outside the town. Besides to the questions of water supply and sewage disposal, the Medical Officer calls attention to nuisances arising from the keeping of fowls in cellars under dwelling-houses, to the necessity for paving the yards, and refers to the overcrowding in some parts of the district.

*Sanitary Work done during the Year.* Improvements have been made by paving some of the yards. The cottages in the "Coach and Horses" yard have been closed for habitation, pigsties have been removed from a number of yards, and the cottages in the "White Horse" yard have been rendered fit to live in.

*Further Sanitary Requirements.* (i.) A proper supply of pure

water is the first requirement of this district. (ii.) The provision of an Isolation Hospital in conjunction with the Ashbourne Rural Sanitary Authority. (iii.) The continuous improvement of the yards and houses, and the abolition of nuisances arising from the keeping of animals. (iv.) A system of sewage disposal. (v.) The adoption of proper Bye-Laws.

### BAKEWELL (excluding Workhouse).

Medical Officer of Health, C. W. EVANS, M.B.

Area in Acres, 3,064. Estimated Population, 2,860.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14·6.	24·1.	0·6.	84.

*Action taken with regard to Infectious Diseases.* Twenty-six cases of Small Pox occurred in this district, twenty-two of these were treated in the Workhouse, and three at first in the fire engine shed, and subsequently in a temporary wooden Hospital. The report does not state how the disinfection is carried out after cases of infectious disease.

*General Sanitation.* The water supply in the higher parts of the town is insufficient, as has been pointed out before; the Authority has consulted an Engineer, who has reported to the Board that as much as thirty-one gallons per head per day is being used, and advises the use of waste water meters. A number of improvements have been effected, such as the conversion of privies to water closets.

*Further Sanitary Requirements.* (i.) A system of sewage disposal. (ii.) The provision of an Isolation Hospital in conjunction with the Bakewell Rural Sanitary Authority. (iii.) The adoption of a code of building Bye-Laws. (iv.) Improvement in the scavenging of the district.

### BASLOW AND BUBNELL.

Medical Officer of Health, P. S. FENTEM, M.D.

Area in Acres, 5,635. Estimated Population, 864.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
16·2.	27·7.	Nil.	83.

*Action taken with regard to Infectious Diseases.* There were six cases of Scarlet Fever in this district: fortunately they occurred in houses that permitted of their being isolated, and the disease did not spread.

*General Sanitation.* The water supply of the district is good. Dr. Fentem urges the Board to adopt Building Bye-Laws: this is the second year that this suggestion has been made. There are in the district a large number of defective rubble drains, untrapped

drains, slop-pipes in direct connection with the drains, and nuisances arising from privy middens which are uncovered and below the ground. The refuse of the district appears to be generally thrown into the river Derwent and the Bar brook.

*Further Sanitary Requirements.* (i.) More energetic action on the part of the Nuisance Inspector: no information is contained in the Annual Report of the work done by the Inspector of Nuisances. (ii.) The provision of a free tip by the Sanitary Authority. (iii.) A system of sewerage and sewage disposal. (iv.) The provision of an Isolation Hospital in conjunction with the Bakewell Rural and Urban Sanitary Authorities. (v.) The Annual Report of the Medical Officer should be printed.

### BELPER (excluding Workhouse).

Medical Officer of Health, R. G. ALLEN, M.R.C.S.

Area in Acres, 3,182. Estimated Population, 10,605.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
18.8.	31.3.	1.6.	186.

*Action taken with regard to Infectious Diseases.* Seven cases of Scarlet Fever, eight of Typhoid Fever, one of Small Pox, and one of Diphtheria, were notified during the year: the case of Small Pox was isolated in the common lodging house in which it occurred, five of the cases of Typhoid Fever occurred in one house, the Pottery. The Medical Officer refers to the urgent need of an Isolation Hospital for the district.

*General Sanitation.* Mr. Allen has for several years past found fault with the supply of water provided by the Belper Water Company as being insufficient, and not having sufficient pressure to reach the higher parts of the district: it is with satisfaction that he records that the Company is being taken over by the Board. An ample supply of water would be of the greatest service in this district. There is an excellent fall for the sewers, and if there were a sufficient supply of water, Belper might be made into a model water closet town. The Medical Officer calls attention to the necessity for Public Baths and street watering, after an adequate supply of water has been obtained. In February, a report was sent from the County Council to this Authority, calling their attention, amongst other things, to the unsatisfactory system of scavenging: it is satisfactory to be able to read, that "a step in the right direction has been taken in the emptying of middens and closets gratuitously by the Authority." The Medical Officer, however, is not satisfied that the work is yet done with sufficient system. There appears to be room for action by the Board in the provision of a sanitary common lodging house, as the Medical Officer speaks of the common lodging

houses of his district as being "hotbeds of vice and disease." This certainly ought not to be ; ample powers are given to the Authority and their officers by the Public Health Act, and in the event of the keeper of a common lodging house being convicted for breaches of the law three times, the place may be closed. The Authority is also enabled by Part 3 of the Housing of the Working Classes Act to provide themselves a common lodging house : and this course is strongly to be recommended ; the expenditure will bear interest sufficient to make the place self-supporting.

*Further Sanitary Requirements.* The chief immediate requirements are : (i.) The improvement of the water supply. (ii.) A system of sewage disposal. (iii.) The erection (in conjunction with other Authorities) of an Isolation Hospital.

### BONSALL.

Medical Officer of Health, J. C. INNES, L.R.C.S.

Area in Acres, 2,447. Estimated Population, 1,329.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
19.5.	35.3.	3.7.	170.

*Action taken with regard to Infectious Diseases.* Six cases of Small Pox occurred in the district ; fortunately the cases were limited to one house, which was protected from the public by a barricade being put all round ; all food, &c., was taken to the house by a person appointed by the Board ; afterwards the house was fumigated and the bedding was destroyed. The Medical Officer strongly advises the Authority to adopt the Notification Act. The nuisance at Herbert Lodge, mentioned in the previous Report, is now abated.

*Further Sanitary Requirements.* As mentioned in the previous Report, (i.) A system of Sewage disposal. (ii.) The adoption of the Infectious Diseases (Notification) Act. (iii.) The Annual Report of the Medical Officer should be printed.

### BRAMPTON AND WALTON.

Medical Officer of Health, J. A. GOODFELLOW, M.B.

Area in Acres, 9,852. Estimated Population, 2,532.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
15.0.	31.5.	1.1.	200.

*Action taken with regard to Infectious Diseases.* There were four cases of Small Pox, and several cases of Scarlet Fever and Diphtheria in this district, but, as the Notification Act was not in force when the Medical Officer wrote his report, the exact number is not given.

*General Sanitation.* The land at the intermittent sewage plot has been lightened by burning the clay, but much more will have to be done, and a precipitant be used in a properly constructed precipitating tank, permitting the removal of the sludge without emptying the tank before satisfactory results will be obtained. The Medical Officer calls attention to the great scarcity of water at Walton. Cutthorpe and Old Brampton also require water. Holymoorside has an excellent supply of water which is constantly running from a number of stand pipes in the streets, the supply being free.

*Further Sanitary Requirements.* (i.) The improvement of the means of treating the sewage at Holymoorside, and properly using the land at the Cutthorpe sewage plot. (ii.) The provision of an Isolation Hospital in conjunction with the Chesterfield Borough.

### BUXTON.

Medical Officer of Health, F. TURNER, M.R.C.S.

Area in Acres, 1,147. Estimated Population, 7,781.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
13·8.	22·4.	0·3.	114.

*Action taken with regard to Infectious Diseases.* During the year there were eleven cases of Small Pox and nineteen of Scarlet Fever. Six cases of Small Pox and three of Scarlet Fever were removed to the Isolation Hospital, and five cases of Small Pox to the Workhouse temporary hospital.

*General Sanitation.* A site for a new Cemetery has been obtained. Additional precipitating tanks have been constructed for dealing with the sewage, and money has been borrowed for the construction of filters. A great length of new sewer has been laid, and a portion of the main sewer in the Hartington Road has been lowered so as to effect a more uniform gradient. Extraordinary efforts were made, during the year, to keep up the supply of water. the drought fully proving the necessity for the additional water works the district is providing for itself.

*Further Sanitary Requirements.* (i.) The completion of the water scheme now in hand. (ii.) The provision of the Cemetery in accordance with the plan already submitted to the Local Government Board. (iii.) The filtration of the effluent from the sewage works, plans for which are already before the Local Government Board. (iv.) More systematic enforcement of Bye-law No. 66, and Sections 76 to 79 of the Public Health Act.

**CHESTERFIELD** (excluding Workhouse).

Medical Officer of Health, J. E. GOULD, M.D., D.P.H.

Area in Acres, 1,219. Estimated Population, 22,530.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
20·9.	37·7.	2·9.	221.

*Action taken with regard to Infectious Diseases.* Ninety-six cases of Small Pox, one hundred and ninety-one of Scarlet Fever, twenty-nine of Typhoid, and ten of Diphtheria occurred during the year. Eighty-five of the cases of Small Pox were removed to the wooden sheds which served as a temporary isolation hospital. Dr. Gould gives details as to the character of the vaccination of all the cases of Small Pox which occurred subsequent to his being appointed Medical Officer; these will be found under the heading of Small Pox, but briefly the results may be summarised thus:—

There were seventy-four persons who showed vaccination marks who had the disease; of these none died. One person stated that he was vaccinated, but had no marks; he did not die. Seventeen unvaccinated persons took the disease; of these five died.

The Steam Disinfector did excellent work during the year, as many as 954 articles being disinfected. Dr. Gould speaks strongly of the necessity for a proper permanent Isolation Hospital.

*General Sanitation.* During the year the water supply of the Chesterfield Water Company became altogether insufficient, the reservoirs running empty; the quality of the water also became objectionable. This, and the high temperature during the year, were the chief factors in the production of the large number of deaths from Diarrhoea. A very large amount of systematic Sanitary work has been taken in hand, details as to which are given in the Inspector's returns. Bye-laws for the Paving of Yards and Courts, for regulating Slaughter-houses and offensive trades, and Regulations under the Dairies, Cowsheds and Milk-shops' Orders, were submitted to the Local Government Board.

*Further Sanitary Requirements.* (i.) The closure of houses unfit for habitation in the district of Dogkennels and other parts. (ii.) The construction of precipitating tanks at the sewage works, and the laying out of the farm on a systematic plan which will insure the sewage being applied intermittently. (iii.) The provision of an Isolation Hospital in conjunction with the adjoining Urban districts. (iv.) The acquisition of an additional water supply.

## CLAY CROSS.

Medical Officer of Health, A. MACKINTOSH, M.D.

Area in Acres, 1,443.      Estimated Population, 8,000.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
16·0.	42·0.	3·7.	160.

*Action taken with regard to Infectious Diseases.* The Notification Act is not yet in force in this district, although arrangements have been made for the payment of a fee to all medical men notifying voluntarily: this arrangement is not a satisfactory one, as no penalty attaches if the notification is withheld. The Zymotic death rate was 3·7 per 1,000, towards which Typhoid Fever and Diarrhoea contributed a rate of 3·0: this district has had a continuously high death rate from these filth diseases. In 1890 and 1891, it had the highest death rate from these causes; in 1892, it was the highest but one, having a rate of 1·6 against 0·5 in the whole County; while in 1893, it was again the highest but one, with a rate of 3·0 per 1,000, against a rate of 1·1 in the whole County. This continued high death rate from filth diseases is a matter which should call forth the most energetic action on the part of the Sanitary Authority. When Typhoid Fever occurred, everything was done to prevent it spreading, but it will continue to recur until the insanitary conditions, which Dr. Mackintosh has repeatedly reported on, are remedied.

*General Sanitation.* The County Council forwarded a complaint to the Local Government Board with regard to this district. Up to the present time, the result has been that the Board has undertaken to carry out the scavenging themselves, but this is not done as well as it should be. They have also appointed an Inspector of Nuisances to devote his whole attention to his work. Slowly the district is improving, but much requires to be done, particularly in the way of converting middens to water closets or slop-water closets, or filling them up to the ground level, covering them over, and rendering the bottoms of them impervious; and in the paving of yards and courts.

*Further Sanitary Requirements.* (i.) The adoption of the Infectious Diseases (Notification) Act. (ii.) The provision of an Isolation Hospital, in conjunction with the Chesterfield Rural Sanitary Authority. (iii.) The abatement of midden nuisances by conversion to water or slop-water closets. (iv.) The improvement or closure of the insanitary dwellings repeatedly reported to the Authority, (v.) More systematic management of the sewage farms. (vi.) Until the district has remained free from Typhoid Fever for some length of time, arrangements should be made for the daily collection of Typhoid excreta, so that it could be removed from the vicinity of habitations and destroyed. (vii.) The adoption of proper Bye-Laws.

## DRONFIELD.

Medical Officer of Health, A. MACKINTOSH, M.D.

Area in Acres, 1,046. Estimated Population, 4,000.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
24.2.	35.7.	4.0.	202.

*Action taken with regard to Infectious Diseases.* During the year, six cases of Small Pox, thirty-five of Scarlet Fever, eight of Diphtheria, and one of Typhoid, were notified. The cases of Small Pox were kept at home: the bedding and the soiled garments of the patients were afterwards destroyed. The cases of Diphtheria were found associated with nuisances arising from defective drainage. Dr. Mackintosh points out that there will be great difficulty in abating these nuisances until a sewerage system has been carried out.

*General Sanitation.* Dr. Mackintosh calls attention to the necessity for the immediate removal of the contents of ash-pits and privies, of heaps of refuse and organic filth from close to the houses: he writes, "I am of opinion that this work should be undertaken by the Sanitary Authority, as it alone can properly organise the means of doing the work in a satisfactory manner. If you are not disposed to go this length as yet, you might, at least, provide a proper place or places for the disposal of these accumulations." A scheme of sewerage has been prepared, but owing to the difficulty in obtaining a proper site for the Disposal Works, the matter has been allowed to stand over.

*Sanitary Requirements.* (i.) The chief sanitary requirement of the district is a complete system of sewerage and sewage disposal. (ii.) The scavenging of the district by the Authority is urgently needed. (iii.) The provision of a proper Isolation Hospital, in conjunction with the Chesterfield Rural Sanitary Authority: it is true the Authority has purchased some cottages, but they are not suitable for the purpose of an Isolation Hospital. (iv.) The Annual Report of the Medical Officer should be printed.

## FAIRFIELD.

Medical Officer of Health, C. J. BENNET, M.R.C.S.

Area in Acres, 3,448. Estimated Population, 2,103.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
20.9.	43.3.	Nil.	142.

*Action taken with regard to Infectious Diseases.* During the year 1893 one case of Small Pox, one case of Scarlet Fever, and one of Typhoid Fever were reported. The case of Small Pox was removed to the Chapel-en-le-Frith Workhouse, the bedding was destroyed, and the house thoroughly disinfected.

*General Sanitation.* A tank has been constructed to receive the sewage of Fairfield Town End. The drains have been relaid and trapped at Laburnum Cottage and Belle Vue Terrace. The main sewer has been extended in Hades Lane, so as to take in forty-two houses, but Proctor's Yard remains in the insanitary condition in which it was found when Mr. Bennet and I inspected it. The scavenging of the district has been carried out fairly well. Owing to the prolonged drought the water supply did not prove sufficient, and had to be augmented from a source which, the Medical Officer thinks, will not be available in the future; the population of the District is increasing, and unless the water storage is increased the supply will fail, even in an ordinary summer.

*Further Sanitary Requirements.* (i.) The improvement of the insanitary property reported on by the local Medical Officer of Health and myself. (ii.) The adoption of proper bye-laws. (iii.) The provision of an Isolation Hospital in conjunction with the Chapel-en-le-Frith Rural Sanitary Authority. (iv.) The improvement of the water supply.

### GLOSSOP (excluding Workhouse).

Medical Officer of Health, J. RHODES, M.R.C.S.

Area in Acres, 3,033. Estimated Population, 22,865.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
20·4.	25·9.	1·9.	213.

*Action taken with regard to Infectious Diseases.* The following cases of Infectious Diseases were notified during the year:— Small Pox, six; Scarlet Fever, sixty-nine; Diphtheria, forty-eight; and Typhoid Fever, forty-eight; there were also eleven cases of Puerperal Fever. The cases of Small Pox were removed to the small Joint Hospital just outside the town; during the year twelve of the cases of Typhoid were removed to the same Hospital.

*General Sanitation.* A scheme for the sewerage and the disposal of the sewage of the district has been prepared, the Corporation having submitted to an Order of the Court (under the Rivers Pollution Prevention Act) being made upon them for carrying out the works within twelve months. The Medical Officer records that the water carriage system has been adopted in some of the Public Elementary Schools. From a report, dated December 6th, it appears that the Medical Officer is recommending the adoption of waste water closets.

No information is given in the report as to the sufficiency of the water supply of Glossop during the drought, nor as to the pollution of the water supply of Hadfield.

*Further Sanitary Requirements.* (i.) A complete sewerage and sewage disposal scheme is urgently necessary so as to permit of

the conversion of the privies to the water carriage system. (ii.) The question of water supply requires consideration. (iii.) A joint hospital district, under the Isolation Hospitals Act, should be formed of this and the Glossop Rural District.

## HEAGE.

Medical Officer of Health, G. GARNHAM, M.R.C.S.

Area in Acres, 2,366. Estimated Population, 2,500.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14.8.	37.6.	Nil.	84.

This district is without any Bye-Laws, houses are erected without party walls being carried up to the roof, the bricks being laid without proper bonding; the gable ends of a row of three houses recently put up have been made of 3 inch brickwork. Privies have recently been built below the level of the ground, and slop-pipes made in direct communication with the drains. Most of the drains of the district are made of rubble, and permit the slop water to either soak into the foundations of the houses or into the wells. Under these circumstances, a formal complaint was made to the Local Government Board, under Section 299 of the Public Health Act, 1875, "that the Sanitary Authority had made default in enforcing the provisions of the Public Health Act," and, in particular, that the Authority had not provided the district with proper sewers. An enquiry was held by the Local Government Board, the complaint of the County Council was held to be well founded, and the Authority has undertaken to carry out a sewerage scheme. As soon as pipe sewers are laid the nuisance from accumulations of slop water will be abated, and then the other sanitary defects of the district must be taken up. It was not suggested that a complete sewerage system should be provided, but that short lengths of sanitary pipe sewers should be laid, so as to conduct the sewage away from the houses on to the surface of the land, where it should be precipitated and irrigated on osier beds.

I cannot help thinking that it would be to the advantage of the people of this district if the Local Board were disbanded, and the district handed over to the Belper Rural Sanitary Authority. By Section 57 of the Local Government Act, whenever a County Council is satisfied that a *prima facie* case is made out for the transfer of any Urban District to a Rural District, the County Council may cause an enquiry to be made in the locality, and if satisfied that such proposal is desirable, may make an Order accordingly, which Order is, of course, subject to the approval of the Local Government Board. This course would be a strong one to take, but unless the Authority adopts proper Bye-Laws and improves its administration, it is the only course that is left for the County Council to take.

## HEANOR.

Medical Officer of Health, W. H. TURTON, M.B.

Area in Acres, 1,597. Estimated Population, 10,440.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14·2.	44·2.	3·1.	112.

*Action taken with regard to Infectious Diseases.* Sixty-six cases of Diphtheria and Membranous Croup were notified: of these, seven proved fatal. Dr. Turton writes, "Crops of cases have been traced to children attending school while suffering from mild attacks: early in the year one crop of cases was *entirely* amongst the children attending the same class in the same school." The foul emanations from the sewer ventilators in the streets, and a quagmire caused by accumulations of pigging refuse and sewage matter in a field between Park Street and Loscoe Road, are also mentioned by Dr. Turton as contributory causes. Thirty-two cases of Typhoid Fever were notified, defective drains being found where any cause could be ascertained for the disease. There were also twenty-four cases of Scarlatina and two cases of Small Pox notified during the year. One of the latter was in the person of a packman, who, as soon as he was informed that he was suffering from Small Pox, and not to go out of doors, walked off to Mansfield; it is satisfactory to record that he was isolated there, and finally was fined £2 and costs, at the Ripley Petty Sessions, for exposing himself while suffering from Small Pox.

*General Sanitation.* The water supply during the year was scarcely sufficient. The shaft was deepened five yards: this procedure got over the difficulty, at any rate for the year. Land at Langley Mill, for the deposit of refuse, has been obtained, and has effected a great improvement in the tidiness of the district. The present imperfect system of disposing of the sewage of the district is under consideration, with the view of improving it.

*Further Sanitary Requirements.* (i.) The Bye-Laws of the district, with regard to New Buildings, are quite obsolete. (ii.) The water supply is barely sufficient. (iii.) Precipitating tanks are required at the sewage works, and more land is required. (iv.) The Authority should join with Ilkeston for the provision of a Joint Isolation Hospital.

## ILKESTON (Borough.)

Medical Officer of Health, J. CARROLL, M.B., D.P.H.

Area in Acres, 2,526. Estimated Population, 20,930.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
17·1.	42·9.	1·7.	177.

*Action taken with regard to Infectious Diseases.* Since the

adoption of the Notification Act, in April, 1893, 90 cases of Typhoid Fever were reported, giving a rate of 4·3 per 1,000 of population against 1·73 in the urban districts of the county, and 1·62 in the whole county. In reference to Typhoid Fever Dr. Carroll writes:—"The great prevalence of this disease in your district points to a most serious and dangerous state of matters. It is a well-known fact that our water supply is from polluted sources; our soil and subsoil are polluted by old-fashioned, leaky, privy-middens, and by defective drains and sewers." Typhoid Fever is essentially a preventible disease, and the large number of cases occurring in Ilkeston demands an answer to the question—What is the Sanitary Authority doing to prevent it? There were also 112 cases of Scarlatina reported during the year, 10 of Diphtheria and Croup, and 1 of Small Pox. Two cases of Cholera appeared in the district; both proved fatal. Dr. Carroll advocates the free admission of patients to the Isolation Hospital, on the ground that their removal to the Hospital is more for the benefit of the public than of themselves, and that the wholesale remission of the fees—without which the isolation of cases among the working classes is impossible—has an appearance of charity, which is naturally resented. The purchase of a proper steam disinfector is advocated.

*General Sanitation.* Dr. Carroll advises the substitution of waste water closets, or water closets, for privy middens and tub closets. This change is advocated on the grounds of economy as well as public health. The refuse of the district is still disposed of on public tips, and a destructor is advocated: this method of getting rid of the refuse is at work at Buxton, and I cannot speak too highly of it. Were the privies converted to waste water closets, and the refuse kept dry, steam could be raised by the burning of the refuse. A large number of Notices for the Abatement of Nuisances were served during the year, but it appears from the Report that an Inspector of the Local Government Board has inspected the district and suggested that an Assistant Nuisance Inspector should be appointed. Dr. Carroll asks the Corporation, if they take this step, to appoint someone with a practical knowledge of building construction.

*Further Sanitary Requirements.* The Sanitary requirements of the district remain the same as for last year, namely:—(i.) The acquiring of a proper water supply. (ii.) The provision of a steam disinfector (this will be provided by the Joint Hospital Committee, if one is formed, so that the matter might stand over for the present). (iii.) Improvement in the methods of refuse and sewage disposal—(a) by the abolition of privy middens; (b) some more sanitary method of disposing of solid refuse, as by burning in a destructor; (c) by the more systematic disposal of the sewage.

## LONG EATON.

Medical Officer of Health, A. B. CHAMBERS, M.D.

Area in Acres, 2,099. Estimated Population, 10,630.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
15·6.	36·2.	2·5.	124.

*Action taken with regard to Infectious Diseases.* During the year 145 cases of Scarlet Fever were notified. The disease spread all over the district, and as there was no Isolation Hospital in the district, closing the schools was the only chance of stopping it. There were 5 cases of Small Pox. The disease was introduced by a railway-man ; he gave it to the man and wife with whom he lodged. Arrangements were made for a married couple next door to supply them with food : the woman was re-vaccinated ; the man refused re-vaccination, took the disease and died ; the woman did not take it. The clothing, bedding, etc., was destroyed, the paper was stripped off the walls, and the houses were fumigated. Dr. Chambers calls the attention of his Authority to the necessity for a steam disinfecter.

*General Sanitation.* A number of surface wells have been closed, the new water being laid on. It is satisfactory to note that the Sanitary Authority is taking advantage of the fact that a public water supply has been laid on to adopt water closets in the place of pails.

*Further Sanitary Requirements.* (i.) The gradual adoption of water closets and slop water closets in the place of pails and privy middens. (ii.) The provision of an Isolation Hospital in conjunction with Ilkeston.

## MATLOCK.

Medical Officer of Health, W. MOXON, M.R.C.S.

Area in Acres, 4,203. Estimated Population, 5,600.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
15·1.	24·4.	0·5.	109.

*Action taken with regard to Infectious Diseases.* The Notification Act is not in force in this district, the Medical Officer therefore does not hear of the cases of Infectious Disease unless they occur in his own practice, or prove fatal, and he hears of them through the Registrar of Deaths. Mr. Moxon writes, "In November, a gentleman residing at Nottingham came into the district, was taken ill the same day, and died after a few days illness. The cause of death was certified as Scarlet Fever." Had the case not proved fatal, it is possible that the attention of the Medical Officer would never have been called to the matter at all. Everyone interested in the welfare of Matlock must agree with the Medical Officer of Health of the district, when he writes that he is of the

opinion that the adoption of the Infectious Diseases Notification Act and the provision of a suitable building for the isolation of Infectious Diseases are amongst the most urgent sanitary requirements of the district.

*General Sanitation.* Difficulties have arisen in the conduction of the common lodging houses in a manner which is consistent with the requirements of a Health Resort, the Medical Officer therefore advises the Authority to purchase some old factory or other suitable building, and convert it into a common lodging house, offering such convenience that the other lodging houses would be compelled to close. Public abattoirs are advocated, and would undoubtedly be a great improvement to the district.

*Further Sanitary Requirements.* (i.) The adoption of the Infectious Diseases (Notification) Act. Buxton has had the Act in force for some years now, and it is found to be a distinct advantage to the district as a health resort. The Medical Superintendent of the largest Hydropathic Establishment in Matlock is in favour of Notification, and it is to be hoped that the Board will adopt the Act at an early date. It cannot be too clearly understood that the Notifications remain private, and are only known to the officers of the Board whose duty it is to prevent Infectious Diseases from spreading. (ii.) A system of sewage disposal. (iii.) The improvement of the common lodging houses and slaughter houses, on the lines suggested by the Medical Officer of Health. (iv.) The provision of an Isolation Hospital, in conjunction with the surrounding Authorities.

## MATLOCK BATH.

Medical Officer of Health, G. HARVEY, L.R.C.P.

Area in Acres, 337. Estimated Population 1,890.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
13·2.	30·1.	1·0.	140.

*Action taken with regard to Infectious Diseases.* Three cases of Small Pox occurred in this district: since the report was written the Board have adopted the Notification Act, and are to be congratulated upon having taken this step.

*General Sanitation.* The main sewerage of Scartabin Nick is already felt as a great boon to the locality: the Authority is still considering the difficult question of the disposal of the sewage of their district. The new water supply, which the Board has procured, is said to be ample, and of excellent quality.

*Further Sanitary Requirements.* (i.) The first sanitary requirement of the district is a proper system of sewers, and an arrangement for disposing of the sewage. (ii.) The provision of an Isolation Hospital, in conjunction with the surrounding Authorities.

## NEWBOLD AND DUNSTON.

Medical Officer of Health, W. S. SYMES, L.K.Q.C.P.I.

Areas in Acres, 2,802. Estimated Population, 5,470.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
24.3.	44.9.	7.8.	207.

*Action taken with regard to Infectious Diseases.* In this district, 176 cases of Small Pox occurred during the year: this large number of cases was due to the fact that the Hospital was not large enough to accommodate all the cases. A Magistrates' Order was obtained for the removal of a man suffering from the disease to the Hospital. Mr. Symes writes, "nearly all the fatal cases were unvaccinated." Of 176 cases, 112 were admitted to the temporary Hospital.

*General Sanitation.* The Bye-Laws of this district were formulated in 1876, and new ones should be adopted. During one of my inspections of the district, I found the mortar at some new houses was made of lime, road scrapings, and domestic rubbish, and that a brick drain was being laid. There are in the district, too, a number of nuisances arising from defective privy construction, and iron and other imperfect drain traps.

*Further Sanitary Requirements.* (i.) The Medical Officer advises the Authority to unite with the Chesterfield Borough and adjoining Urban Authorities for the construction and maintenance of a proper permanent Hospital for Infectious Diseases. (ii.) Building Bye-Laws should be made up to date. (iii.) The Annual Report of the Medical Officer should be printed.

## NEW MILLS (excluding Workhouse).

Medical Officer of Health, J. E. ANDERTON, M.R.C.S.

Area in Acres, 5,200. Estimated Population, 6,685.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
19.8.	30.2.	2.8.	128.

*Action taken with regard to Infectious Diseases.* As the Notification Act only came into force in October, the number of cases of infectious disease is not fully known. One case of Small Pox occurred; the man was isolated at the Isolation Hospital at Hyde; all the persons who were in contact with him were re-vaccinated, and the disease did not spread. Eight cases of Diphtheria and Croup were notified, and ten of Scarlet Fever.

*General Sanitation.* There are many old houses in New Mills built on the side of steep hills, which are formed of millstone grit; frequently the privies, in the rear of the houses, are on a higher level, and percolate underneath them; on the top side of many of the houses, too, there are defective rubble drains, so that

in some parts the whole hillside is saturated with liquid filth. In some houses examined by Mr. Anderton, he found six or eight inches of foul-smelling liquid precolated into the ash-hole underneath the kitchen grate. The Sanitary Authority is about to carry out a scheme for the disposal of the sewage of their district ; they should be urged to appoint someone to serve notices upon the owners of property to couple their drains up to the new sewers at the time the trenches are open. This plan is not only the most effective, because the drains and sewers can all be inspected and tested together, but also the cheapest, because the ground does not have to be broken up twice. The water supply still remains in the unsatisfactory state referred to in the previous Report ; at the end of the summer the reservoirs would have run dry were it not for the water that was pumped up from the Gow Hole Tunnel. It would be to the advantage of all concerned if the owners of the Water Works and the Local Board could fix upon some water engineer of standing to examine the works, and, without the aid of arbitrators, settle the price to be given for them by the Board.

*Further Sanitary Requirements.* (i.) A fresh water supply. (ii.) A sewerage and sewage disposal scheme. (iii.) The provision, in conjunction with Chapel-en-le-Frith and Hayfield Rural Sanitary Authorities, of an Isolation Hospital.

## NORTH DARLEY.

Medical Officer of Health, W. MOXON, M.R.C.S.

Area in Acres, 5,142. Estimated Population, 2,270.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14.5.	33.9.	3.0.	155.

*Action taken with regard to Infectious Diseases.* The cases of infectious disease notified during the year were :—Small Pox, one ; Scarlatina, fourteen ; Diphtheria and Croup, three ; Typhoid Fever, three. It was found necessary to close the schools on account of Scarlet Fever ; this step successfully put an end to the outbreak.

*General Sanitation.* The condition of Midland Cottages, Rowsley, is said to be most insanitary, the closets being too close to the houses. The Medical Officer again calls attention to the pollution of the water supply by surface drainage.

*Further Sanitary Requirements.* (i.) The provision of an Isolation Hospital in conjunction with the adjoining Sanitary Authorities. (ii.) The protection of the water supply against surface pollutions.

## RIPLEY.

Medical Officer of Health, E. GAYLOR, L.R.C.P.E.

Area in Acres, 1,211. Estimated Population, 7,000.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14·0.	38·0.	2·0.	116.

*Action taken with regard to Infectious Diseases.* The most important of the infectious diseases reported were fourteen cases of Scarlet Fever, two of which proved fatal; three of Typhoid Fever, one of which was fatal; and seven of Diphtheria and Membranous Croup, three of which died. There were also three mild cases of Small Pox; all the persons in contact with them were re-vaccinated, and in consequence the disease did not spread.

*General Sanitation.* The water supply of this district has been short for a long time. Ripley is situated on the coal measures, and it will be impossible for the Authority to obtain a really good supply of water locally. During the year I analysed some half-dozen waters, and advised the Authority to make arrangements with the Lutterley Co. for a supply of the shaft water from the Hartshay Colliery, the best of the waters submitted to me. Mr. Gaylor calls attention to the desirability of the Board's undertaking the scavenging of the district. He writes:—"The accumulations of refuse and cinder heaps, with all their filthy additions, close to the cottage dwellings, are complained of daily, and are, in reality, injurious to the health of the people, especially the infantile population, who must, of necessity, spend the first years of their lives in these filthy surroundings. The inhabitants cannot get these heaps removed. I am aware that one large owner of house property does remove these heaps from the houses, but there must be, at least, many hundreds of houses which are literally choked up, the whole atmosphere reeking with the decomposing materials which form these nuisances. I can see no other solution of the difficulty than that the Authority should undertake this matter themselves, and I think it is one of the duties incumbent on the Authority." (Perhaps the difficulty would be met by the Board entering into a contract with the owner of the property referred to above, for removing the refuse for the whole district, including his own property.)

*Further Sanitary Requirements.* (i.) The Medical Officer calls the attention of the Authority to the necessity of an Isolation Hospital for the district. (ii.) The Bye-laws of the district are dated 1868, and are now obsolete. (iii.) The water supply is not satisfactory. (iv.) The Board should undertake a contract for the scavenging of their district. (v.) The Medical Officer's Annual Report ought to be printed at the cost of the Authority.

## SOUTH DARLEY.

Medical Officer of Health, M. H. F. CANTRILL, M.R.C.S.

Area in Acres, 2,007. Estimated Population, 765.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14·3.	27·4.	Nil.	142.

*Action taken with regard to Infectious Diseases.* One case of Scarlet Fever was notified ; this was all the infectious disease in this small district during the year.

*Further Sanitary Requirements.* (i.) The sewage at Darley Bridge goes direct into the river Derwent ; it should be diverted upon the land, or be dealt with by precipitation. (ii.) The Authority should combine with the adjoining Authorities for the provision of an Isolation Hospital.

## SWADLINCOTE.

Medical Officer of Health, J. HAMILTON, M.D.

Area in Acres, 3,670. Estimated Population, 14,326.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
17·1.	38·2.	2·7.	180.

*Action taken with regard to Infectious Diseases.* Two cases of Small Pox, eleven of Scarlatina, six of Diphtheria, and five of Typhoid Fever were reported during the year in this district, but nothing very definite as to their causation was elicited. Dr. Hamilton, although stating that the Infectious Disease Notification Act has been most useful, points out that it is impossible to isolate Scarlatina and Diphtheria without a proper Isolation Hospital.

*General Sanitation.* Schemes for the sewerage of Swadlincote have been before the Board. The water supply of the district is insufficient : a scheme is now before the Local Government Board for obtaining a supply from the Trent gravel at Milton.

*Further Sanitary Requirements.* (i.) A better water supply. (ii.) A sewerage and sewage disposal scheme. (iii.) The provision of an Isolation Hospital and a steam disinfector, in conjunction with the Burton Rural Sanitary Authority.

## WHITTINGTON.

Medical Officer of Health, A. PALMER, M.R.C.S.

Area in Acres, 1,573. Estimated Population, 8,798.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
20·0.	44·0.	4·6.	222.

*Action taken with regard to Infectious Diseases.* During the year 1893 there were in this district ninety-five cases of Small Pox, sixty-two of which were removed to Hospital. The Notification

Act is not in force in this district, and no accommodation was ready for the isolation of the first cases that occurred. It is not surprising, therefore, to find that the disease should have obtained such a hold.

*General Sanitation.* The Medical Officer, at the time he wrote his report, had only been appointed a few months, and no reference is made to the urgent necessity for paving yards and courts, metalling streets, and dealing with the defective drains; whole streets of which can be found. The Board have, since my last report, started to remove domestic refuse, but the present system is far from satisfactory. Attention ought to be called to the fact that this district had the highest infantile mortality in the county—of every thousand children born two hundred and twenty-two died before they were twelve months old, against one hundred and forty-two in the whole county.

*Further Sanitary Requirements.* (i.) The adoption of the Infectious Diseases Notification Act. (ii.) The provision of an Isolation Hospital in conjunction with the Borough of Chesterfield and the adjoining Urban Authorities. (iii.) The abolition of nuisances from drains and privy middens, and the improvement of the yards and private streets. (iv.) The proper management of the intermittent sewage filters by the Board themselves, instead of letting the land as a farm. (v.) The Annual Report of the Medical Officer should be printed.

## WIRKSWORTH.

Medical Officer of Health, A. E. BROSTER, M.R.C.S.

Area in Acres, 3,020. Estimated Population, 3,751.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
23·9.	30·1.	3·4.	194.

*Action taken with regard to Infectious Diseases.* Five cases of Small Pox occurred in this district; three cases were in one family; one died; the clothing of the family was destroyed by fire; the family were re-clothed at the expense of the public, and the furniture was replaced by the Board. After this occurrence Mr. Arkwright, J.P., provided the district with a small Isolation Hospital, to which two further cases were removed—one of these being removed under a Magistrate's Order under the Public Health Act. There were also during the year fifteen cases of Scarlatina and fourteen of Typhoid Fever which came to the knowledge of the Medical Officer of Health; in every case the house was thoroughly disinfected by burning sulphur and washing the floors down with corrosive sublimate solution.

*General Sanitation.* A scheme for the sewerage and sewage disposal of the district was laid before the Local Government

Board, but, owing to the opposition, the Local Government Board required a different site. A new site has been fixed upon, but it cannot be obtained without a Provisional Order. If the Authority consented to wait until the new District Councils were formed the owner of the land has promised to sell it if the District Council is in favour of the site. The Board decided to let the matter stand over. The dairies, cowsheds, and milkshops are all inspected and periodically lime-washed : the lodging-houses and slaughter-houses were also inspected and found in good order. The water supply of the district is barely sufficient.

*Sanitary Improvements effected during the year.* The Board adopted the Infectious Diseases Prevention Act on the 6th of December, 1893. This Act, amongst other things, simplifies the method of causing houses to be disinfected after Infectious Disease. The Board have also, as suggested by their Medical Officer of Health, concluded an arrangement for the yearly tenancy of a piece of land for use as a public recreation ground.

*Further Sanitary Requirements.* (i.) Further water storage is required. (ii.) A system of sewers and sewage disposal is urgently needed. (iii.) In conjunction with the adjoining Authorities a proper permanent Isolation Hospital should be erected.

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## RURAL SANITARY DISTRICTS.

## ASHBOURNE (Derbyshire portion).

Medical Officer of Health, P. R. LITTLETON, M.R.C.S.

Area in Acres, 76,451. Estimated Population, 10,631.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
14.4.	28.0.	1.5.	77.

*Action taken with regard to Infectious Diseases.* The Notification Act is not in force in this district: there were, however, two deaths from Scarlatina, two from Diphtheria, and one from Typhoid Fever, as well as five from measles and six from Whooping Cough. Fortunately, the cases of Diphtheria, by accident came to the knowledge of the Medical Officer of Health, who was thereby enabled to take means to prevent the disease spreading.

*General Sanitation.* Several cases of overcrowding were dealt with during the year: in January, at Alstonfield, a man, his wife, and four children, were found living in a cottage with one bedroom; in February, at Kirk Ireton, a family, consisting of man, wife, wife's mother, and six children, were living in a cottage with only two rooms; in the parish of Thorpe, two families, one consisting of man, wife, and four children, the other of man and two children, were found living in a two-roomed cottage: these cases were all remedied. In August, 1893, the attention of the Authority was called by the County Council to two houses unfit for habitation, one at Brassington and the other at Thorpe: the former had only one room upstairs, which was occupied by nine persons, the floor was below the level of the ground, the windows downstairs did not open, and, in fact, the house was absolutely unfit for habitation; the other house was the Post Office at Thorpe, the roof of which was particularly defective: a new roof has been put on, and the premises have been made fit to live in. With regard to the water supply: in many of the villages it is not sufficiently protected from pollution by man and animals; this is particularly the case at Tissington and Bentley: the Medical Officer anticipates now that the Parish Councils Bill is coming into force, that improvements in the water supply will be effected. At Brassington, Hartington, Kirk Ireton, Middleton-by-Wirksworth, Parwich, and Rodsley, as well as several others of the large villages,

schemes for disposing of the sewage are necessary. Sanitary pipe sewers are required in nearly all the villages to conduct the sewage away from the houses, and on to the surface of the land.

*Further Sanitary Requirements.* (i.) The adoption of the Infectious Diseases Notification Act. (ii.) The purification of the river Hensmore. (iii.) The provision of an Isolation Hospital, in conjunction with the Ashbourne Urban Sanitary Authority. (iv.) The sewerage of the larger villages, the protection of the water supplies from pollution, and the most systematic abatement of nuisances.

### ASHBY-DE-LA-ZOUCH (Derbyshire portion).

Medical Officer of Health, T. W. KYLE, M.D., D.P.H.

Area in Acres, 17,475. Estimated Population, 7,027.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
16.9.	35.2.	1.9.	141.

*Action taken with regard to Infectious Diseases.* Twenty-seven cases of Scarlatina, nine of Diphtheria, and six of Typhoid Fever, were reported in this district: as usual, notices went to the schools recommending that children should not be admitted until a certificate had been received that the Sanitary Authority had disinfected the houses. Dr. Kyle recommends that cases of Scarlatina should be isolated in a Hospital, and that the Authority should adopt the Infectious Diseases Prevention Act.

*General Sanitation.* The water supply of a large portion of this district is very bad, and the Authority has joined with Swadlincote in the scheme to obtain a supply from Milton. Mr. Radford had laid before the Authority a small scheme for sinking a well in the parish of Hartshorne, but the Authority decided to go in for the joint scheme. Fifty-three notices were served for the abatement of nuisances arising from defective drains, closets, &c. The Medical Officer again suggests that the Authority should take into consideration the question of removing the refuse from ash-pits, privies, &c. The sewage of Measham passes direct into the Mease, that of Woodville direct into the Hartshorne Brook, and that of Donisthorpe into the brook which runs along the north of the "Island" of Derbyshire.

*Further Sanitary Requirements.* (i.) Sewerage schemes for Woodville, and Donisthorpe, and a scheme of sewage disposal for Measham. (ii.) Improvement of the water supply. (iii.) The provision of a Joint Isolation Hospital for the Derbyshire portion of the district, in conjunction with Swadlincote.

## BAKEWELL, No. 1.

Medical Officer of Health, J. KNOX, M.D.

Area in Acres, 31,519. Estimated Population, 7,880.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
17·7.	27·5.	1·2.	110.

*Action taken with regard to Infectious Diseases.* The Infectious Diseases notified during the year were—Small Pox, six cases; Scarlatina, fifteen cases; Diphtheria, three; and Typhoid, one. The Small Pox occurred in the person of a navvy employed on the High Peak Railway, and five cases occurred before the re-vaccination of those who came in contact with the infection could be effected. One case at Cromford was removed to the Isolation Hospital provided by Mr. Arkwright. On account of Scarlatina the Schools had to be closed at Stanton.

*General Sanitation.* Beyond a certain length of sanitary pipe sewer, which has been laid at Cromford and Stanton, no improvements to speak of have been effected.

*Further Sanitary Requirements.* A detailed report upon the sanitary requirements of this district has been sent to this Authority since Dr. Knox's report was received; briefly they are—(i.) A proper water supply for Elton, Monyash, and other villages. (ii.) The sewerage of Winster and the abolition of a large number of nuisances there, details of which were given. (iii.) Some different arrangement with regard to the Nuisance Inspector should be come to, to enable him to devote a proper amount of time to his duties. (iv.) The provision of an Isolation Hospital in conjunction with the adjoining Authorities.

## BAKEWELL, No. 2.

Medical Officer of Health, P. S. FENTEM, M.D.

Area in Acres, 47,866. Estimated Population, 10,617.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
18·5.	26·9.	2·0.	111.

*Action taken with regard to Infectious Diseases.* In this district there were one hundred and twenty-one cases of Small Pox, twelve of which proved fatal. Dr. Fentem writes—"The outbreak occurred at Newtown, Hathersage. Partly owing to the class of persons chiefly affected, and the want of means of notification and isolation, the disease spread rapidly, and from January 1st to April 10th, 1894, sixty-nine cases came directly under observation.\* The action taken by your Authority by the

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\* The County Council received £200 from the Midland Railway to divide amongst those Authorities who had suffered through the outbreak of Small Pox; the whole of this sum was handed to this Authority. A similar sum was sent by the Company direct to the Ecclesall Bierlow Rural Sanitary Authority.

erection of Isolation Hospitals, the adoption of the Infectious Diseases Notification Act, and in other ways, at last began to have an effect upon the spread of the infection, and from April 10th to June 9th, when the last case was notified, fifty-two cases were recorded." The most important of the other steps referred to by Dr. Fentem was the erection of a temporary wooden Isolation Hospital at Hathersage. Besides these cases of Small Pox there were notified twelve of Scarlatina, three of Diphtheria, and two of Typhoid Fever.

*General Sanitation.* Dr. Fentem refers to the insanitary condition of the Common Lodging-house at Stoney Middleton; since writing his report the house has been improved. During the year a supply of water has been forced up to Cressbrook by means of a ram. The water supply of a large portion of this district is very insufficient, the people in many of the villages being entirely dependent upon rain-water collected in meres and tubs. Several suggestions have been sent to the Authority for their consideration, including one for the utilization of the water coming down the Magpie Level, which is found upon analysis to be organically pure and free from lead. The quantity of this water is probably from six to eight million gallons a day. The suggestion is that a competent Engineer should be consulted upon the practicability of forcing the water by rams or turbines to a reservoir on the top of one of the hills, from which it could be distributed over the district.

*Further Sanitary Requirements.* The chief requirements of the district are—(i.) An adequate water supply for the villages of Ashford, Hartington (Earl Sterndale), Flagg, Abney, Foolow, Grindlow, Hucklow, Litton, Stoney Middleton, etc. (ii.) The disposal of the sewage of Hathersage and Tideswell. (iii.) The provision of an Isolation Hospital in conjunction with the Bakewell Urban Sanitary Authority. (iv.) Some different arrangements with regard to the Nuisance Inspector should be made to enable him to devote a proper amount of time to his work.

### BASFORD (Derbyshire portion).

Medical Officer of Health, J. S. TEW, M.D., D.P.H.

Area in Acres, 5,355. Estimated Population, 5,614.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
12.8.	37.5.	1.6.	117.

*Action taken with regard to Infectious Diseases.* Thirty-nine cases of Diphtheria were notified during the year, twenty-eight of which were at Codnor, ten in the adjoining village of Loscoe, and one in the parish of Codnor Park; there were also nineteen cases of Scarlatina, and nine of Typhoid Fever; the number of cases of Diphtheria per 1,000 of the population was the largest in the County. The Authority has decided to erect a proper permanent

Isolation Hospital at a cost of £11,000; the Hospital unfortunately will be in Nottinghamshire, and will not be available for the Derbyshire parishes now that they, by the passing of the Local Government Act, are severed from the Basford Authority.

*General Sanitation.* A scheme for the disposal of the sewage of Codnor and Loscoe was prepared and submitted to the Local Government Board. The scheme was opposed by the parish. The land it was proposed to take was very heavy, and the County Council supported the Parish Meeting, asking the Local Government Board to suggest that Mr. Radford should submit an alternative scheme of precipitation and intermittent land filtration at two sites. The parish of Codnor and Loscoe abounds with serious nuisances arising from the absence of sewers, and accumulations of sewage matter lying in ditches close to houses, and from privies which are uncovered, sunk below the ground, and, in some cases, overflow into an adjoining ditch. The water supply is derived from surface wells, many of which are in dangerously close proximity to privy-middens and accumulations of slop-water. If a comprehensive water scheme for the supply of the whole of the Sanitary Districts on the south of the coal measures could be carried out, as suggested to the different Authorities by the Public Health Committee, the parishes of Codnor and Codnor Park should join in.

*Further Sanitary Requirements.* (i.) A sewerage scheme. (ii.) A proper water supply is required. (iii.) The provision of an Isolation Hospital in conjunction with the adjoining Authorities.

#### BELPER No. 1.

Medical Officer of Health, E. GAYLOR, L.R.C.P.E.

Area in Acres, 35,135. Estimated Population, 11,585.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
13.3.	28.7.	0.5.	87.

*Action taken with regard to Infectious Diseases.* There was in this district very little infectious disease during the year, the only important outbreak being one of Diphtheria, at Idridgehay, due to school influence. Mr. Gaylor sent to the County Council a detailed report upon the outbreak, which contained the result of a patient and thorough investigation: with his conclusions I thoroughly agree. The Medical Officer calls attention to the desirability of the Authority making arrangements for the provision of a proper Isolation Hospital.

*General Sanitation.* The water supply of Hartshay, Marehay, Waingroves, Street Lane and Turnditch, are defective. A sewage farm is in course of construction at Marehay and a large number of nuisances were abated during the year. The dairies, cowsheds,

and milkshops were systematically inspected, and any insanitary conditions found were removed.

*Further Sanitary Requirements.* (i.) The provision of an Isolation Hospital in conjunction with the Belper Urban Authority. (ii.) The improvement of the water supply of the parts named, and the provision of pipe sewers in many of the villages, to convey the sewage away from the wells and houses.

## BELPER No. 2.

Medical Officer of Health, J. ALLEN, M.R.C.S.

Area in Acres, 15,487. Estimated Population, 11,696.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
13·7.	34·2.	1·0.	107.

*Action taken with regard to Infectious Diseases.* This district also was freer from infectious diseases than it has been; there were three cases of Small Pox at South Wingfield, the disease being prevented from spreading by the prompt re-vaccination of all persons in contact with the first case.

*General Sanitation.* The new water supply to Duffield is being taken up rapidly by the householders. In the last Report the Medical Officer called attention to the necessity for a water supply for the village of Mapperley; he now records that a good supply which was running to waste, in Shipley Park, has been forced up to the village by means of a ram. The supply of water to Smalley is inadequate, while the new supply to South Wingfield has not yet been taken in hand. There is, in South Wingfield, more than one source from which water could be obtained, and if difficulty is experienced in obtaining the supply which the Authority first thought of, a supply should have been sought from a fresh source.

Attention is called to the stench arising from the ditch which receives the Kilburn sewage, and to the pollution of the Bottle Brook by the sewage of the village. The sewage of Duffield is passed directly into the Ecclesbourne Brook and the river Derwent; and comprehensive sewerage schemes are also required at Denby, Holbrook, and Horsley Woodhouse. The County Council called the attention of the Authority, in October, 1893, to eight houses, some half-dozen of which were unfit for human habitation.

*Further Sanitary Requirements.* (i.) The provision of an Isolation Hospital in conjunction with the Belper Urban Authority. (ii.) The sewerage of the villages of Kilbourne, Denby, Holbrook and Horsley Woodhouse, and the purification of the sewerage of these places as well as that of Duffield. (iii.) The improvement of the water supply of South Wingfield, Smalley, and several other villages.

### BURTON-UPON-TRENT (Derbyshire portion).

Medical Officer of Health, J. HAY MOIR, M.D.

Area in Acres, 53,319. Estimated Population, 14,645.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
18.2.	28.7.	1.7.	116.

*Action taken with regard to Infectious Diseases.* The Notification Act is not in force in this district ; during the year there were a number of cases of Diphtheria, seven of which proved fatal : these cases chiefly occurred in the neighbourhood of Willington. Three cases of Small Pox came to the knowledge of the Medical Officer, in April : they were removed to the Isolation Hospital of the Swadlincote Local Board. Dr. Moir urges the Authority to adopt the Infectious Diseases (Notification) Act, and, when referring to the outbreak of Diphtheria, states that all the cases, with one exception, were brought to his notice after the death of the patients, or during convalescence, so that he could not advise preventive measures until too late.

*General Sanitation.* The Authority has a scheme before it for supplying Willington with water ; at Linton, a new pipe drain has been laid ; pipe sewers and small sewage disposal works, consisting of precipitating tanks and osier beds, are required at Church Broughton, Church Gresley, Coton-in-the-Elms, Findern, Hilton, Linton Heath, Newton Solney, Rosliston, Walton-on-Trent, and Willington ; and a disposal works at Egginton and Etwall ; while a thorough scheme of sewerage and sewage disposal is wanted at Repton, the sewage of which place is poured into the Repton Brook a mile or so above where the water for Swadlincote is to be taken from the Trent gravel.

*Further Sanitary Requirements.* (i.) The provision of an Isolation Hospital, in conjunction with Swadlincote. (ii.) The sewerage schemes as specified above. (iii.) The improvement of the water supply of Willington. (iv.) The adoption of the Infectious Diseases (Notification) Act.

### CHAPEL-EN-LE-FRITH (including Workhouse).

Medical Officer of Health, C. J. BENNET, M.R.C.S.

Area in Acres, 74,631. Estimated Population, 14,013.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality
16.8.	29.7.	0.7.	103.

*Action taken with regard to Infectious Diseases.* There were nineteen cases of Small Pox, twenty of Scarlatina, sixteen of Diphtheria, and twelve of Typhoid Fever, notified during the year in this district : the Small Pox cases occurred chiefly among the navvies working on the Dore and Chinley Railway ; the bedding, &c.,

and the huts occupied by the navvies at Edale were burned. Of the seventy-one cases of Scarlatina, fifty occurred in Hartington Upper Quarter : the first cases were in the house of a laundress : the disease spread rapidly until the schools were closed ; fortunately, the epidemic was of an extremely mild type.

*General Sanitation.* Plans for the disposal of the sewage of Chapel-en-le-Frith were laid before the Local Government Board ; plans have also been prepared for the disposal of the sewage of Castleton, but no steps have yet been taken for dealing with that of Hope and Whalley Bridge. The Medical Officer suggests that the Sanitary Authority should make arrangements for a permanent supply of water to Chapel Milton. At the present time, the village has a supply which was laid on by one of the contractors on the Dore and Chinley Railway : possibly, this supply might be obtained. A large quantity of water has been tapped by the Midland Railway Company in their Cowburn Tunnel. I have analysed a sample of this water, and it is organically pure ; the water is hard, but will get softer each year : possibly, it might be utilised. The water supply at Hope is reported as defective : I have since obtained samples of the public wells, and find that, upon analysis, both waters show signs of contamination, and are, in my opinion, dangerous to drink. Mr. Bennet recommends that a supply of water should be laid on to the village of Edale. Since writing his report, I believe this has been done by the village, in conjunction with the Midland Railway Company. At Peak Forest, water was very scarce during the year : the only supply was from a pump well, the water of which was dangerously polluted.

*Further Sanitary Requirements.* (i.) The sewage disposal schemes of Chapel-en-le-Frith, Castleton, and Whalley Bridge and Hope. (ii.) The improvement of the water supply of several portions of the district, including Hope and Peak Forest, and the securing of a permanent supply to Chapel Milton. (iii.) The provision of an Isolation Hospital, in conjunction with New Mills and Hayfield.

## CHESTERFIELD.

Medical Officer of Health, ANGUS MACKINTOSH, M.D.

Area in Acres, 70,654. Estimated Population, 63,070.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality
16.9.	39.3.	2.6.	159.

*Action taken with regard to Infectious Diseases.* The cases of Infectious Disease in this district during 1893 were—Small Pox, one hundred and seventy-eight ; Scarlatina, two hundred and ninety-six ; Diphtheria and Croup, twenty-three ; Typhoid Fever, ninety. Twenty-eight cases of Small Pox were removed to the Chesterfield Borough Hospital, twenty-eight to the Morton Hospital,

and two to the Workhouse, while one hundred and twenty were treated at their own homes. The Sanitary Authority prosecuted a man who did not notify that he was suffering from the disease. The man kept a public house, and had not called in a medical practitioner. With regard to the Scarlatina Dr. Mackintosh writes:—"Owing to the want of proper means for isolation and the effectual disinfection of the houses your officers could not deal energetically with the cases as they occurred; in consequence Scarlatina spread almost all over the district, but fortunately, as it was a mild type, it did not cause an excessive mortality. Nothing very definite was ascertained with regard to the causation of the nineteen cases of Diphtheria. With regard to the ninety cases of Typhoid twenty-five occurred in the model village of Bolsover. Dr. Mackintosh attributes the outbreak to the water supply of the village. The gathering ground of the water is the village of Bolsover, which is built on Magnesian limestone. I analysed a sample of this water and found that it contained twice the organic ammonia of the Cundy Spring coming out of the same formation above Bolsover Castle. The supply to the village must be regarded as extremely suspicious. As far as chemical analysis is concerned, it supports Dr. Mackintosh's contention. Bolsover has since been made into an Urban Sanitary District: the attention of the new Authority has been called to the matter. There were also seventeen cases of Typhoid Fever at Staveley, thirteen at Eckington, and seven at Ashover. In the last village the water is derived from surface wells and running streams; in the other two parishes the water supply was short, and it is very probable that water from polluted sources was temporarily used.

*General Sanitation.* Owing to the prolonged drought the water supply became very short. The Authority have a scheme in hand for increasing their storage. Many villages and hamlets in the parishes of Ashover, Stretton, Brackenfield, Wessington, Heath, and Calow, are still dependent on surface wells and polluted streams for their water supply. It is to be hoped that the Authority will undertake a comprehensive scheme as they have ample gathering ground, some 500 acres, with a collectable rainfall of fifteen inches, and the greater part of the district adjoining, up to the east boundary of the County, requires water. Taking the total rainfall on the gathering ground as thirty-five inches the Authority should, according to a generally accepted rule, provide storage for, at least, one hundred and seventy days' supply. Dr. Mackintosh recommends the Authority to make arrangements for the scavenging of the more densely populated portions of the district. Depôts have been provided in two parishes, which have proved a very great convenience to the inhabitants. Dr. Mackintosh does not refer in any detail to the method of purifying the sewage of his district. A detailed report upon this question

was sent from the County Council in August, 1893, and this is, I believe, receiving the attention it demands. A number of the cowsheds and dairies were inspected by Dr. Mackintosh; several dairies were found in places which were never intended for that purpose, such as cellars: Dr. Mackintosh's suggestions for their alteration were being carried out. Excellent Building Bye-laws have been adopted by the Authority, and are generally enforced. All the more important villages have been provided with sanitary pipe sewers.

*Further Sanitary Requirements.* (i.) A sewerage and sewage disposal scheme for the village of Ashover. (ii.) As mentioned in the Report for last year, improvements in the system for the disposal of sewage of nearly every parish. (iii.) Increased water storage and the subsequent extension of the mains to the villages which have not yet a proper supply. (iv.) The provision of means of isolating persons suffering from infectious diseases.

### DARLEY ABBEY (Derby).

Medical Officer of Health, W. G. COPESTAKE, M.R.C.S.

Area in Acres, 324. Estimated Population, 931.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
15·0.	19·2.		55.

*Action taken with regard to Infectious Diseases.* One case of Small Pox occurred in this district and was removed to the Borough of Derby Infectious Diseases Hospital. By an order of the County Council under the Local Government Act—"District and Parish Councils"—this district is transferred to the Belper Rural Sanitary Authority. As the Authority has never even adopted the Infectious Diseases Notification Act, its transfer to the Belper Rural Sanitary District cannot be but to the advantage of the inhabitants of the district.

### ECCLESALL BIERLOW.

Medical Officer of Health, A. K. GALE, M.R.C.S.

Area in Acres, 10,630. Estimated Population, 8,418.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
19·1.	38·6.	3·5.	150.

*Action taken with regard to Infectious Diseases.* As many as 222 cases of Small Pox were reported in this district during the year. Mr. Gale made enquiries as to the vaccination of all the cases, and gives the following results:—

Vaccinated, 130.	Doubtful, 19.	Unvaccinated, 73.
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Of this number 19 died—

Vaccinated, 0.	Doubtful, 3.	Unvaccinated, 16.
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This gives a percentage mortality as follows—

Vaccinated, 0 per cent.	Doubtful, 15·6 per cent.	Unvaccinated, 19·1 per cent.
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It will be seen that of the unvaccinated 19·1 per cent. died, while of the vaccinated and of the doubtful class 2 per cent. died.

An instance is also given of a family of ten, five members of which were unvaccinated and five were vaccinated; every unvaccinated person took the disease, while none of the vaccinated took it; one of the unvaccinated was vaccinated while the disease was incubating. The Authority erected a temporary wooden Isolation Hospital. The outbreak was chiefly amongst the navvies engaged on the Dore and Chinley Railway, and the Midland Railway Company gave the Authority £200 towards meeting the extra expense incurred through the outbreak. In addition to the Small Pox there were forty-two cases of Scarlatina, twenty-three of Diphtheria and Croup, and fifteen of Typhoid Fever; these last chiefly occurred in Little London.

*General Sanitation.* During the summer there was great scarcity of water in some parts of the district: the Medical Officer advocates the extension of the Sheffield Water Company's mains. A large volume of water, which was tapped in the tunnel at Totley, is now running to waste; this water, if collected at its source in the tunnel, might be obtained quite free from contamination: the Sanitary Authority should endeavour to acquire an interest in the water as, if the flow keeps up it will become of value. The insanitary conditions described in the last Report at Totley Rise, have been remedied, but the sewage is not yet properly purified. The scavenging of the Norton Special Drainage District has been carried out by a contractor, and a number of long-standing nuisances have been abated.

*Further Sanitary Requirements.* (i.) The Medical Officer advocates the extension of the Sheffield Water Company's mains to Bole Hill, Norton and Greenhill. (ii.) The purification of the sewage of Totley and Sheffield Road. (iii.) The provision of an Isolation Hospital in conjunction with the Chesterfield Rural Sanitary Authority.

## GLOSSOP.

Medical Officer of Health, J. RHODES, M.R.C.S.

Area in Acres, 17,749. Estimated Population, 4,481.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
21·2.	23·8.	4·4.	205.

*Action taken with regard to Infectious Diseases.* There were eight cases of Small Pox in this district; four of them were of men whose occupations brought them in contact with the disease, viz :—A porter and an attendant at the Workhouse, and two men who were engaged in disinfecting the rooms. As the Notification Act is not yet in force, the Medical Officer has no exact knowledge as to prevalence of other infectious diseases.

*General Sanitation.* The Report does not refer to the insanitary conditions present at Marple Bridge, nor to the necessity of carrying out works there for the purification of the sewage. The County Council have called the attention of the Authority to the filth, both solid and liquid, which is thrown into the river there.

*Further Sanitary Requirements.* (i.) A special Drainage Board should be formed, to purify the sewage of Compstall and Marple Bridge. (ii.) The Infectious Diseases Notification Act should be adopted. (iii.) The provision, in conjunction with the Borough, of an Isolation Hospital suitable for isolating two or more infectious diseases at the same time.

## HAYFIELD (Derbyshire portion).

Medical Officer of Health, C. J. BENNET, M.R.C.S.

Area in Acres, 9,335. Estimated Population, 4,000.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
16·2.	24·7.	0·5.	111.

*Action taken with regard to Infectious Diseases.* In this district, there were, during the year, two cases of Small Pox, twenty-two of Scarlatina, two of Diphtheria and Croup, and two of Typhoid Fever. The Small Pox was imported into the district with some clothes which were brought to be washed: the cases were removed outside the County to the Infectious Diseases Hospital at Hyde. The cases of Diphtheria occurred at Greendoors and Brook-bottom, in the parish of Mellor, and were found associated with defective drains and a foul privy.

*General Sanitation.* At the present time, the sewage of Hayfield passes direct into the river Sett, which joins the Goyt at New Mills. During the year, plans have been prepared for disposing of the sewage of the town. There are in Hayfield a very large number of nuisances arising from defective drains, which cannot be properly abated until the sewerage scheme is carried out. The

Medical Officer writes, "the slaughter houses in the district are far from being satisfactory : several are under dwelling houses, and the drainage is not properly disposed of. The water supply of Hayfield is not satisfactory, owing to the distances the people have to fetch the water, and to the liability of some of the springs to become polluted." There should no difficulty in getting an excellent constant supply of water for Hayfield; owing to its being built on the edge of the Millstone Grit, having the gathering ground of Kinderscout above it. The Medical Officer suggests that the Authority should take into consideration the desirability of constructing a reservoir up one of the Kinder valleys.

*Further Sanitary Requirements.* (i.) Schemes for the disposal of the sewage of Hayfield, and other centres of population. (ii.) The provision of an Isolation Hospital, in conjunction with New Mills and Chapel-en-le-Frith. (iii.) The Medical Officer's Annual Report should be printed.

### MANSFIELD (Derbyshire portion).

Medical Officer of Health, J. O. LITTLEWOOD, M.R.C.S.

Area in Acres, 21,240.	Estimated Population, 17,895.		
Death Rate, 16.5.	Birth Rate, 47.1.	Zymotic Death Rate, 2.0.	Infantile Mortality, 117.

*Action taken with regard to Infectious Diseases.* One hundred and fourteen cases of Typhoid Fever occurred in this district during the year, giving it the unenviable position of having the highest Typhoid case rate in the whole County, namely, 6.3 per 1,000. Sixty-one cases occurred at Doe Lea : here the water supply was not satisfactory, although, after personally examining into this outbreak, I agree with Mr. Littlewood that it was not responsible for causing the disease, the infection probably being due to emanations from the sewers, and the leakage from the privies of sewage matter under the foundations of the houses. Twenty-three cases of Diphtheria were reported, and there were five deaths from this cause and Membranous Croup. Mr. Littlewood suggests that Tonsilitis is frequently mistaken for Diphtheria : if this is so, it is much better that a few cases which are not true Diphtheria should be reported than that the notifications should not be made immediately, but delayed until diagnosis is certain. The proportion of deaths to cases was the same in this district as in the whole County and in the whole of England. One hundred and fourteen cases of Scarlet Fever were reported, but the epidemic was of a mild type. There were also during the year, sixteen cases of Small Pox, which were isolated in temporary huts.

*General Sanitation.* Sufficient care is not taken to dispose of the sewage of the district. The Medical Officer advises the Sanitary Authority to provide a scheme for the removal of the

ashes and refuse of the district. The attention of the Authority is called to the filthy condition of the canal at Pinxton, and to the pollution of the river at Doe Lea. Certain parts of the parish of South Normanton are urgently in need of a better water supply. A number of the houses in the parish of Ault Hucknall also are in need of a better supply, and the supply to Doe Lea Cottages requires some improvement.

*Further Sanitary Requirements.* (i.) The improvement in the method of disposing of the sewage of the district. (ii.) The provision of an Isolation Hospital, in conjunction with the Chesterfield Rural Sanitary Authority. (iii.) The improvement of the water supplies mentioned.

### ROOTHERHAM (Derbyshire Portion).

Medical Officer of Health, W. J. LETALL, M.R.C.S.

Area in Acres, 3,136. Estimated Population, 2,852.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
18·5.	47·3.	3·0.	148.

*Action taken with regard to Infectious Diseases.* In this parish there were reported during the year the following cases of infectious disease :—Scarlatina, 11 ; Diphtheria, 1 ; Typhoid Fever, 2. The Medical Officer suggests to the Authority the advisability of combining with other Authorities for the purpose of providing an Isolation Hospital.

*General Sanitation.* The parish of Beighton pours its sewage direct into the Ochre Dyke, a tributary of the river Rother; in consequence of there being no sewers, the slop-water lies upon the surface of the ground in offensive pools, or drains down the gutters in the streets. Nuisances arising from the want of paving of the yards are common, and many of the new roads are almost impassable through accumulations of rubbish lying on the surface. The water supply should be extended to a number of houses at Sothall. I reported on this district in December, 1892; my Report was sent to the Authority, but up to the present time merely minor nuisances have been dealt with, and it would be obviously to the advantage of the district that it should be added to the Chesterfield Rural District.

*Further Sanitary Requirements.* (i.) A sewerage and sewage disposal scheme. (ii.) The abatement of the nuisances referred to. (iii.) The provision of an Isolation Hospital in conjunction with the Chesterfield Rural Sanitary Authority.

## SHARDLOW

**(Derbyshire portion, including Workhouse.)**

Medical Officer of Health, C. HARWOOD, M.D.

Area in Acres, 42,804. Estimated Population, 27,219.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality.
16·6.	33·2.	1·4.	106.

*Action taken with regard to Infectious Diseases.* In this district the infectious diseases notified during the year were—Small Pox, six ; Scarlatina, forty-seven ; Diphtheria and Croup, twenty-three ; Typhoid, nineteen. The Small Pox was introduced into the district by tramps at the Workhouse, one of the attendants taking the disease. A case also occurred at Normanton Barracks, and another at Ockbrook. The cases were isolated in the Derby Borough Isolation Hospital.

*General Sanitation.* Systematic scavenging is carried out at Sandiacre and Osmaston, and the Medical Officer would like to see it extended to other parishes. A large number of notices have been served to put on the Long Eaton water in the parish of Melbourne. It is satisfactory to read in the Surveyor's Report "steps are being taken to deal with the purification of the sewage at Sandiacre."

*Further Sanitary Requirements.* (i.) The provision of an Isolation Hospital in conjunction with the adjoining Authorities. (ii.) Schemes for the disposal of the sewage of Sandiacre, Stapleford, Stanton, Little Eaton, Spondon, and the more densely populated portions of the district. (iii.) The scavenging of the more Urban parts of the District.

## TAMWORTH (Derbyshire portion).

Medical Officer of Health, H. J. FAUSSET, M.D.

Area in Acres, 2,746. Estimated Population, 323.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
—	—	18·5.	—

*Action taken with regard to Infectious Diseases.* Only two parishes of this district (Chilcote and Croxall) are in the Administrative County of Derby, and no cases of Infectious Disease occurred in these parishes during the year. The Authority has provided an Isolation Hospital at a cost of £3,000. Coal is being bored for in the parish of Chilcote : if it is reached the population will, of course, increase, and the district will cease to be purely agricultural, as it now is. The parish of Croxall will, under the Local Government Act, probably be handed over to the Administrative County of Warwickshire.

### UTTOXETER (Derbyshire portion).

Medical Officer of Health, B. H. HERBERT, M.R.C.S.

Area in Acres, 16,689. Estimated Population, 2,589.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
18·1.	25·8.	0·3.	164.

*Action taken with regard to Infectious Diseases.* The Infectious Diseases Notification Act is not in force in this District, and the information with regard to infectious disease is necessarily vague. There were three deaths from Typhoid Fever, but there would be other cases which, not proving fatal, would not come to the knowledge of the Medical Officer of Health.

*General Sanitation.* The Authority has decided to proceed with the powers given them under the Uttoxeter Water Act, 1892, to take the water from Somersall Herbert to Uttoxeter. The drainage works of Doveridge have been allowed to stand over until the formation of a Parish Council.

*Further Sanitary Requirements.* (i.) The adoption of the Infectious Diseases (Notification) Act. (ii.) The purification of the sewage of Uttoxeter. (iii.) The improvement of the drainage of Doveridge. (iv.) The provision of an Isolation Hospital in conjunction with the Ashbourne Urban and Rural Sanitary Authorities.

### WORKSOP (Derbyshire portion).

Medical Officer of Health, C. WILLS, M.R.C.S.

Area in Acres, 12,830. Estimated Population, 7,062.

Death Rate,	Birth Rate,	Zymotic Death Rate,	Infantile Mortality,
17·5.	42·0.	1·1.	141.

*Action taken with regard to Infectious Diseases.* The Infectious Diseases notified during the year were Small Pox, two cases; Scarletina, twenty-four; Diphtheria and Croup, seven; Typhoid Fever, nineteen. The interesting outbreak of Typhoid Fever which occurred at Clowne is dealt with. Here an outbreak of Typhoid Fever occurred in a row of new cottages supplied with water from a new well sunk in the virgin rock. The outbreak was a mystery until the Medical Officer found out that the excreta from a case of Typhoid Fever, which occurred about a quarter of a mile away, had been carefully buried in an allotment fifty yards from the well on the side from which the water came. The quantity of water flowing into the well was so great that the polluting matter could not be detected by chemical analysis. That the outbreak was due to the water is shown by the fact that the water was the only condition common to all the infected houses, and that whole families escaped where no water

was drunk or only after filtering or boiling. This outbreak at Clowne occurred at the end of 1892, and is of importance as showing the necessity for the bacteriological examination of waters in connection with outbreaks of Typhoid Fever.

*General Sanitation.* The water supply of Wales and Barlboro' is poor. The Authority has had a comprehensive scheme laid before them by Mr. Eaton, but the expense of the scheme seems to have been prohibitive. From the report it appears that an Engineer might with advantage be employed to report upon the practicability of supplying some, at least, of the Derbyshire parishes with water from the magnesian limestone in the neighbourhood. The mains of the Chesterfield Rural Sanitary Authority might be extended to the district when that Authority has increased its storage. During the year a sewerage scheme was carried out at Clowne.

*Further Sanitary Requirements.* (i.) The improvement of the water supply. (ii.) The provision of an Isolation Hospital in conjunction with the Chesterfield Rural Sanitary Authority. (iii.) Sewerage schemes for Barlboro' and Whitwell.

TABLE IV.] COUNTY OF DERBY. Year ending December 31st, 1893.

Table giving the Birth Rate and the Death Rates from several causes in each of the URBAN Sanitary Districts of the County.

Notification Act in Force.	URBAN SANITARY DISTRICT.	MEDICAL OFFICER OF HEALTH.	AREA (Acres).	POPULATION.			BIRTHS.	DEATHS.	Annual Rates per 1,000 of estimated Population.									
				CENSUS. 1881.	CENSUS. 1891.	ESTI- MATED. 1893.			Birth Rate.	Death Rate.	Zymotic Death Rate.	Death Rate from Continued Fevers & Diarrhoeal Diseases	Phthisis Death Rate.	Respiratory Death Rate.	Infantile Death Rate per 1,000 Births.			
Yes.	ALFRETON ... ... ... ...	E. Gaylor, L.R.C.P.E. ... ...	4,625	13,855	15,355	15,700	610	277	38·8	17·6	2·1	0·8	1·5	2·6	157			
Yes.	ALVASTON AND BOULTON ... ...	W. H. Wright, M.R.C.S. ... ...	2,166	1,506	3,116	3,670	142	64	38·6	14·7	1·9	0·6	0·8	3·2	119			
Yes.	ASHBOURNE (including Workhouse) ...	P. R. Littleton, M.R.C.S. ...	572	3,485	3,810	3,852	104	94	26·9	24·4	2·0	*2·0	2·3	3·8	211			
	" (without Workhouse) ... ...	... ... ... ...	...	...	...	...	102	76	26·4	19·7	1·8	1·8	1·8	3·3	203			
Yes.	BAKEWELL (including Workhouse) ...	C. W. Evans, M.B. ...	3,064	2,502	2,748	2,860	71	63	24·8	22·0	1·7	0·3	3·4	2·7	84			
	" (without Workhouse) ... ...	... ... ... ...	...	...	...	...	69	42	24·1	14·6	0·6	0·3	2·7	2·0	84			
Yes.	BASLOW AND BUBNELL ...	P. S. Fentem, M.D. ...	5,635	843	861	864	24	14	27·7	16·2	...	...	2·3	...	63			
Yes.	BELPER (including Workhouse) ...	R. G. Allen, M.R.C.S. ...	3,182	9,875	10,420	10,605	344	245	32·4	23·1	1·7	1·6	1·6	4·5	191			
	" (without Workhouse) ... ...	... ... ... ...	...	...	...	...	332	200	31·3	18·8	1·6	1·4	1·1	4·1	186			
No.	BONSALL ... ... ... ...	J. C. Innes, L.R.C.S. ...	2,447	1,354	1,329	1,329	47	26	35·3	19·5	3·7	1·5	3·7	2·2	170			
Yes.	BRAMPTON AND WALTON ...	J. A. Goodfellow, M.B. ...	9,652	2,457	2,532	2,532	80	38	31·5	15·0	1·1	0·7	0·7	6·5	200			
Yes.	BUXTON ... ... ... ...	F. Turner, M.R.C.S. ...	1,147	6,026	7,640	7,781	175	108	22·4	13·8	0·3	0·1	1·0	1·2	114			
Yes.	CHESTERFIELD (with Workhouse) ...	J. E. Gould, M.D., D.P.H. ...	1,219	19,835	22,009	22,530	850	539	37·7	23·9	3·0	2·1	0·6	6·1	221			
	" (without Workhouse) ... ...	... ... ... ...	...	...	...	...	471	37·7	20·9	2·9	2·0	0·4	4·5	221				
No.	CLAY CROSS ... ... ... ...	A. Mackintosh, M.D. ...	1,443	6,879	7,727	8,000	336	128	42·0	16·0	3·7	3·0	0·5	4·2	160			
Yes.	DRONFIELD ... ... ... ...	A. Mackintosh, M.D. ...	1,046	4,831	3,433	4,000	143	97	35·7	24·2	4·0	2·2	1·7	5·0	202			
Yes.	FAIRFIELD ... ... ... ...	C. J. Bennet, M.R.C.S. ...	3,443	1,464	2,103	2,103	91	44	49·3	20·9	...	2·8	0·9	142				
Yes.	GLOSSOP (including Workhouse) ...	J. Rhodes, M.R.C.S. ...	3,033	19,674	22,414	22,865	594	486	25·9	21·2	1·9	0·6	2·0	5·1	213			
	" (without Workhouse) ... ...	... ... ... ...	...	...	...	...	468	25·9	20·4	1·9	0·6	1·9	4·7	213				
Yes.	HEAGE ... ... ... ...	G. Garnham, M.R.C.S. ...	2,366	2,405	2,490	2,600	94	37	37·6	14·8	...	0·4	1·6	84				
Yes.	HEANOR ... ... ... ...	W. H. Turton, M.B. ...	1,697	6,822	9,779	10,440	462	149	44·2	14·2	3·1	2·2	0·5	1·8	112			
Yes.	ILKESTON ... ... ... ...	J. Carroll, M.B., D.P.H. ...	2,526	14,122	19,744	20,930	839	358	42·9	17·1	1·7	1·2	0·7	2·8	177			
Yes.	LONG EATON ... ... ... ...	A. B. Chambers, M.D. ...	2,099	6,217	9,636	10,630	336	166	36·2	25	0·7	1·1	2·2	124				
No.	MATLOCK ... ... ... ...	W. Moxon, M.R.C.S. ...	4,203	4,395	5,285	5,600	137	85	24·4	15·1	0·5	0·1	2·1	1·9	109			
Yes.	MATLOCK-BATH ... ... ... ...	G. Harvey, L.R.C.P. ...	337	1,698	1,846	1,890	57	25	30·1	13·2	1·0	1·0	0·5	2·6	140			
Yes.	NEWBOLD AND DUNSTON ...	W. S. Symes, L.K.Q.C.P.I. ...	2,802	4,769	5,192	5,470	246	133	44·9	24·3	7·3	3·6	1·0	4·9	207			
Yes.	NEW MILLS (including Workhouse) ...	J. E. Anderton, M.R.C.S. ...	5,200	6,552	6,661	6,685	202	144	30·2	21·5	2·9	1·6	2·0	4·4	128			
	" (without Workhouse) ... ...	... ... ... ...	...	...	...	...	202	133	30·2	19·8	2·8	1·4	2·0	4·3	128			
Yes.	NORTH DARLEY ... ... ... ...	W. Moxon, M.R.C.S. ...	5,142	1,844	2,179	2,270	77	33	33·9	14·5	3·0	2·2	1·3	1·7	155			
Yes.	RIPLEY ... ... ... ...	E. Gaylor, L.R.C.P.E. ...	1,211	6,087	6,815	7,000	266	102	38·0	14·0	2·0	1·2	0·5	1·4	116			
Yes.	SOUTH DARLEY ... ... ... ...	M. H. F. Cantrill, M.R.C.S. ...	2,007	679	754	765	21	11	27·4	14·3	...	...	1·3	1·42	142			
Yes.	SWADLINCOTE ... ... ... ...	J. Hamilton, M.D. ...	3,670	11,893	13,889	14,926	548	245	38·2	17·1	2·7	0·9	0·6	2·9	180			
No.	WHITTINGTON ... ... ... ...	A. Palmer, M.R.C.S. ...	1,673	7,271	8,793	8,798	387	176	41·0	20·0	4·6	2·8	0·8	6·8	222			
Yes.	WIRKSWORTH ... ... ... ...	A. E. Broster, M.R.C.S. ...	3,020	3,678	3,725	3,751	113	90	30·1	23·9	3·4	0·5	2·6	7·1	194			



TABLE IV.

## COUNTY OF DERBY.

Year ending December 31st, 1893.

Table giving the Birth Rate and the Death Rates from several causes, in each of the RURAL Sanitary Districts of the County.

Notification Act in Force.	RURAL SANITARY DISTRICT.	MEDICAL OFFICER OF HEALTH.	AREA (Acres.)	POPULATION.			BIRTHS.	DEATHS.	ANNUAL RATES PER 1,000 OF ESTIMATED POPULATION*						Infantile Death Rate per 1,000 Births.	
				Census. 1891.	Census. 1891.	Estimated. 1893.			Birth Rate.	Death Rate.	Zymotic Death Rate.	Death rate from contaminated Pevers and Diarrhoeal Diseases.	Phthisis Death Rate.	Respiratory Death Rate.		
No	ASHBOURNE (Derby Portion) ...	P. R. Littleton, M.R.C.S. ....	76,451	10,793	10,631	10,631	*298	154	28·0	14·4	1·5	0·18	1·5	3·4	77	
Yes	ASHBY-DE-LA-ZOUCH (Derby Portion) ...	T. W. Kyle, M.D., D.P.H. ....	17,475	6,211	7,013	7,027	248	119	35·2	16·9	1·9	0·14	0·85	4·4	141	
Yes	BAKEWELL, No. 1 ...	J. Knox, M.D. ....	31,519	7,727	7,860	7,880	217	140	27·5	17·7	1·2	0·1	0·7	3·4	110	
Yes	BAKEWELL, No. 2 ...	P. S. Fentem, M.D. ....	47,866	10,830	10,617	10,617	286	197	26·9	18·5	2·0	0·1	1·8	4·0	111	
Yes	BASFORD (Derby Portion) ...	J. S. Tew, M.D., D.P.H. ....	5,355	5,388	5,614	5,614	*212	72	37·5	12·8	1·6	1·2	1·0	1·4	117	
Yes	BELPER, No. 1 ...	E. Gaylor, L.R.C.P.E. ....	35,135	10,266	11,108	11,585	383	155	28·7	18·8	0·5	0·1	...	1·7	87	
Yes	BELPER, No. 2 ...	J. Allen, M.R.C.S. ....	15,487	11,364	11,132	11,696	401	161	34·2	18·7	1·0	0·6	0·6	2·1	107	
No	BURTON-ON-TRENT (Derby Portion) ...	J. A. Moir, M.D. ....	53,319	14,233	14,562	14,645	421	268	28·7	18·2	1·7	0·2	1·8	3·4	116	
Yes	CHAPEL-EN-LE-FRITH (including Workhouse) ...	C. J. Bennet, M.R.C.S. ....	74,631	12,557	14,013	14,013	417	236	29·7	16·8	0·7	0·2	0·9	0·2	103	
Yes	CHESTERFIELD ...	A. Mackintosh, M.D. ....	70,654	54,322	59,192	68,070	2,480	1,069	39·3	16·9	2·6	1·5	0·7	4·0	159	
No	DERBY (Darley Abbey) ...	W. G. Copestate, M.R.C.S. ....	324	995	931	931	18	14	19·2	15·0	...	...	...	5·3	55	
Yes	ECCLESALL BIERLOW ...	A. K. Gale, M.R.C.S. ....	10,630	5,400	8,044	8,418	325	161	38·6	19·1	3·5	0·8	0·7	4·1	150	
No	GLOSSOP ...	J. Rhodes, M.R.C.S. ....	17,749	3,976	4,383	4,481	107	95	23·8	21·2	4·4	3·1	2·9	6·4	205	
Yes	HAYFIELD (Derby Portion) ...	C. J. Bennet, M.R.C.S. ....	9,835	4,043	3,952	4,000	*99	65	24·7	16·2	0·5	0·2	1·5	4·5	111	
Yes	MANSFIELD (Derby Portion) ...	J. O. Littlewood, M.R.C.S. ....	21,240	12,777	16,773	17,895	844	297	47·1	16·5	2·0	1·3	0·7	2·9	117	
Yes	ROOTHERHAM (Derby Portion) ...	W. J. Le Tall, M.R.C.S. ....	8,136	2,071	2,852	2,852	*185	58	47·3	18·5	3·0	2·8	1·0	2·8	148	
Yes	SHARDLOW (Derby Portion, including Workhouse) ...	C. Ilarwood, M.D. ....	42,804	24,879	26,159	27,219	904	458	33·2	16·6	1·4	0·3	1·2	2·7	106	
Yes	TAMWORTH (Derby Portion) ...	H. J. Fausset, M.D. ....	2,746	264	315	323	6	1	18·5	Population too small to express as rates per 1,000.						
No	UTTOXETER (Derby Portion) ...	B. H. Herbert, M.R.C.S. ....	16,689	2,627	2,589	2,589	67	47	25·8	18·1	0·3	0·3	0·3	6·1	164	
Yes	WORKSOP (Derby Portion) ...	C. Wills, M.R.C.S. ....	12,880	5,817	6,880	7,062	297	124	42·0	17·5	1·1	0·9	1·6	1·8	141	
18 RURAL DISTRICTS OF DERBYSHIRE ...				565,375	206,540	224,570	232,548	8,115	3,881	34·8	16·6	1·8	0·8	1·0	3·3	129
28 URBAN DISTRICTS ...				80,621	172,447	202,198	209,746	7,505	3,967	35·7	18·9	2·4	1·3	1·2	3·5	171
18 RURAL DISTRICTS ...				565,375	206,540	224,570	232,548	8,115	3,881	34·8	16·6	1·8	0·8	1·0	3·3	129
WHOLE ADMINISTRATIVE COUNTY ...				645,996	378,987	426,768	442,294	15,620	7,848	35·3	17·5	2·1	1·1	1·1	3·4	149

\* Estimated from Birth Rate of whole District.

† Including the County Asylum.



## APPENDIX A.]

## COUNTY OF DERBY.

Table A of the Local Government Board.

Table of Deaths during the year 1893 in each of the URBAN Sanitary Districts, Classified according to Ages and Diseases.

URBAN SANITARY DISTRICT.	DEATHS FROM ALL CAUSES AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																					
	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 55	55 and Upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Group.	Typhus.	Enteric or Typhoid.	Continued Fevers.	Relapsing Fevers.	Puerperal Fever.	Cholera.	Erysipelas.	Mesles.	Whooping Cough.	Diarrhoea & Dysentery.	Rheumatic Fever.	Angue.	Phthisis.	Bronchitis, Pneumonia, & Pleurisy.	Injuries.	All other Diseases.	Total.		
ALFRETON ... ... ...	96	44	11	11	53	52	Under 5	...	2	1	...	...	...	...	...	...	...	...	...	...	...	5	20	21	18	82	140		
ALVASTON & BOULTON ...	17	9	5	...	13	10	Over 5	1	3	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
ASHBOURNE (including Workhouse)	22	4	3	7	38	20	Under 5	...	...	...	5	...	...	...	...	1	8	...	3	1	9	3	...	5	15	23	137		
BAKEWELL (including Workhouse)	6	3	2	7	20	25	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
BASLOW & BUBNELL ...	2	...	...	1	4	7	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
BELPER (including Workhouse) ...	55	24	8	7	75	55	Under 5	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
BONSALL ... ... ...	8	...	...	3	7	8	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
BRAMPTON & WALTON ...	15	1	1	...	12	8	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
BUXTON ... ... ...	20	4	8	5	42	28	Under 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
CHESTERFIELD (with Workhouse) ...	188	83	29	19	162	108	Under 5	2	1	1	2	...	...	...	...	1	1	3	3	41	12	10	14	44	5	120	221		
CLAY CROSS ... ... ...	54	23	2	6	24	19	Under 5	...	...	...	...	5	...	...	...	2	1	1	1	3	4	19	71	40	31	187	318		
DRONFIELD ... ... ...	29	11	2	3	27	25	Under 5	...	1	1	1	...	...	...	...	1	1	5	19	1	1	3	16	5	1	18	51		
FAIRFIELD ... ... ...	13	5	3	2	11	9	Under 5	...	1	1	1	...	...	...	...	...	...	2	8	1	1	7	12	3	1	30	57		
GLOSSOP (including Workhouse) ...	127	75	25	24	117	118	Under 5	...	1	1	2	...	...	...	...	1	1	20	3	4	1	1	1	2	1	1	16	25	
HEAGE ... ... ...	8	2	...	4	9	14	Under 5	...	...	...	9	...	...	...	...	1	1	1	1	3	4	14	71	40	31	187	318		
HEANOR ... ... ...	52	26	5	16	23	28	Under 5	...	1	2	3	...	...	...	...	2	1	5	19	1	1	3	16	5	1	18	51		
ILKESTON ... ... ...	150	34	19	14	53	58	Under 5	...	2	1	3	...	...	...	...	3	2	2	8	1	1	7	12	3	1	30	57		
LONG EATON ... ... ...	48	21	12	10	53	22	Under 5	...	1	2	4	...	...	...	...	2	2	10	4	...	...	1	2	1	1	16	25		
MATLOCK ... ... ...	15	3	4	4	40	19	Under 5	...	1	1	1	...	...	...	...	3	2	1	1	1	1	1	2	1	1	11	202		
MATLOCK BATH ... ... ...	8	...	...	1	5	10	Under 5	...	...	...	1	...	...	...	...	2	1	1	1	1	1	1	2	1	1	10	10		
NEWBOLD & DUNSTON ...	51	17	4	3	35	22	Under 5	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
NEW MILLS (including Workhouse) ...	26	22	8	2	56	30	Under 5	...	2	1	3	...	...	...	...	1	1	1	7	...	1	1	1	2	1	243			
NORTH DARLEY ... ... ...	12	4	3	1	7	5	Under 5	...	1	1	3	...	...	...	...	1	1	4	4	...	1	2	1	2	49	96			
RIPPLEY ... ... ...	31	9	3	3	22	34	Under 5	...	1	1	1	...	...	...	...	1	1	1	1	1	1	1	2	1	1	11	17		
SOUTH DARLEY ... ... ...	3	1	...	...	2	5	Under 5	...	...	...	1	...	...	...	...	18	8	...	...	...	...	...	...	...	...	...			
SWADLINCOTE ... ... ...	99	38	4	7	44	54	Under 5	...	1	1	1	...	...	...	...	2	1	2	5	23	...	10	13	6	52	108			
WHITTINGTON ... ... ...	86	21	4	10	30	25	Under 5	...	3	1	2	...	...	...	...	2	1	6	2	2	7	19	13	1	20	69			
WIRKSWORTH ... ... ...	22	11	5	7	11	34	Under 5	...	2	1	1	...	...	...	...	1	1	6	2	2	8	21	5	2	17	57			
28 URBAN SANITARY DISTRICTS OF DERBYSHIRE	1285	445	170	178	1017	873	Under 5	18	15	12	21	...	2	1	...	19	11	13	56	54	208	...	20	332	5	21	964	1729	
							Over 5	24	17	7	9	...	50	...	...	19	11	13	...	1	28	17	...	241	422	271	90	1018	2235
							At all ages	42	32	19	30	...	52	1	...	19	11	13	56	55	236	17	...	261	764	276	111	1982	3967



## COUNTY OF DERBY.

Table A of the Local Government Board.

Table of Deaths during the year 1893 in each of the RURAL Sanitary Districts, Classified according to Ages and Diseases.

RURAL SANITARY DISTRICT.	DEATHS FROM ALL CAUSES AT SUBJOINED AGES.							DEATHS FROM SUBJOINED CAUSES.																					
	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Continued Enteric or Typhoid.	Continued Fevers.	Relapsing.	Puerperal Fever.	Cholera.	Erysipelas.	Mesles.	Whooping Cough.	Diarrhoea & Dysentery.	Rheumatic Fever.	Ague.	Phtisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	Total.	
*ASHBOURNE ... ... ...	23	13	5	3	46	64	{ Under 5 Over 5	... ... 1	1	... ... 3	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	5	6	1	1	... ... 1	16	8	23	13	36				
*ASHBY-DE-LA-ZOUCH ... ... ...	35	15	12	7	19	31	{ Under 5 Over 5	... ... 1	1	... ... 2	... ... 2	... ... 1	... ... 1	... ... 1	... ... 1	3	7	1	1	... ... 1	1	16	16	22	50				
BAKEWELL, No. 1 ... ... ...	24	12	5	8	52	39	{ Under 5 Over 5	... ... 1	1	... ... 2	... ... 2	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	2	4	1	1	... ... 1	5	5	... ... 1	21	36			
BAKEWELL No. 2 ... ... ...	32	16	5	14	61	69	{ Under 5 Over 5	... ... 1	1	... ... 2	... ... 2	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	2	1	1	1	... ... 1	2	2	... ... 1	24	48			
*BASFORD ... ... ...	26	9	1	3	17	17	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	3	1	1	1	... ... 1	2	2	... ... 1	25	34			
BELPER, No. 1 ... ... ...	29	12	8	8	38	60	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	6	6	... ... 1	20	38			
BELPER No. 2 ... ... ...	43	15	4	8	32	59	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	3	2	1	1	... ... 1	4	6	... ... 1	28	41			
*BURTON-ON-TRENT ... ... ...	49	33	12	14	86	69	{ Under 5 Over 5	... ... 2	3	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	1	1	... ... 1	82	114			
CHAPEL-EN-LE-FRITH ... ... ...	43	16	18	13	76	70	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	1	1	... ... 1	54	149			
CHESTERFIELD ... ... ...	895	136	46	56	242	194	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	3	1	1	1	... ... 1	12	14	... ... 1	82	114			
DERBY (Darley Abbey) ...	1	1	1	1	7	3	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	6	1	... ... 1	41	55			
ECCLESALL BIERLOW ... ... ...	49	15	6	5	52	34	{ Under 5 Over 5	... ... 11	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	27	29	... ... 1	80	181			
GLOSSOP ... ... ...	22	12	1	10	27	23	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	1	1	... ... 1	39	69			
*HAYFIELD ... ... ...	11	7	1	8	21	17	{ Under 5 Over 6	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	3	1	1	1	... ... 1	14	14	... ... 1	205	535			
*MANSFIELD ... ... ...	99	34	6	15	83	60	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	1	1	... ... 1	5	12			
*ROOTHERHAM ... ... ...	20	3	3	4	15	8	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	1	1	... ... 1	34	64			
*SHARDLOW ... ... ...	96	54	33	31	110	129	{ Under 5 Over 5	... ... 2	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	6	6	... ... 1	12	34			
*TAMWORTH ... ... ...	...	...	1	...	...	...	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	1	1	1	1	... ... 1	2	2	... ... 1	1	1			
*UTTOXETER ... ... ...	11	5	1	...	6	24	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	3	1	1	1	... ... 1	6	6	... ... 1	14	31			
*WORKSOP ... ... ...	42	12	6	7	38	19	{ Under 5 Over 5	... ... 1	1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	... ... 1	3	1	1	1	... ... 1	6	6	... ... 1	38	54			
20 RURAL DISTRICTS OF DERBYSHIRE ... ...	1,049	425	176	215	1,028	999	{ Under 5 Over 5	20 31	17 10	14 13	17 4	... ... 26	3 1	... ... 1	5 5	45 4	64 2	143 27	4 4	... ... 1	16 226	296 492	7 320	19 89	808 1,133	1,474 2,407			
							At all ages	51	27	27	21	...	29	1	...	20	...	10	49	66	170	4	...	242	788	327	108	1,941	3,881

\* Derbyshire Portions of Rural Districts which overlap adjoining Counties



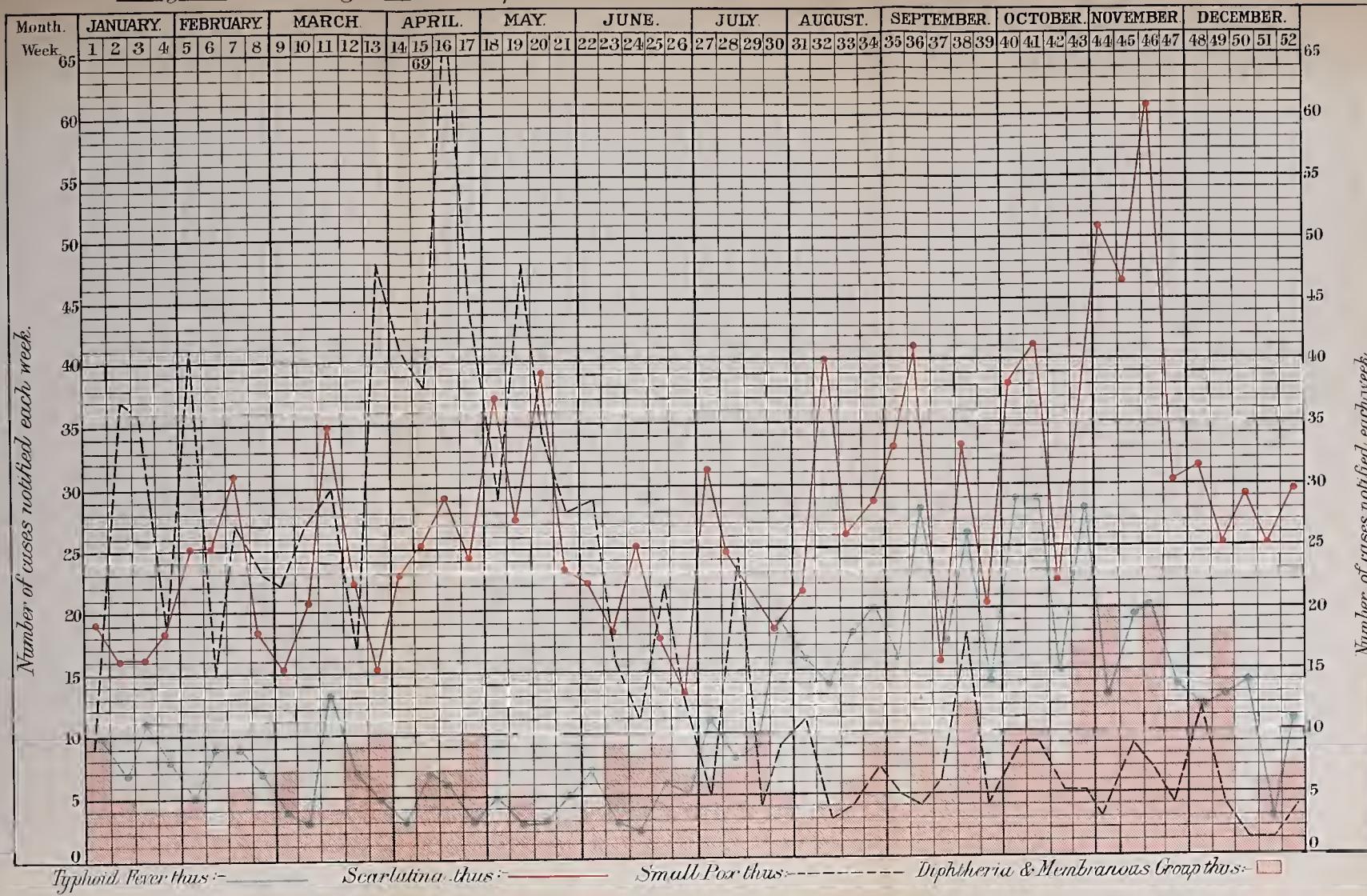
## **INSPECTORS' REPORTS.—URBAN, 1893.**



## **INSPECTORS' REPORTS.—RURAL, 1893.**



—Diagram, shewing Seasonal prevalence of the four chief Zymotic diseases 1893.—





## CHARGES FOR WATER WITHIN THE COUNTY OF DERBY.

	Annual Rent of Houses not exceeding £5.	Annual Rent of Houses not exceeding £10.	Annual Rent of Houses not exceeding £15.	Annual Rent of Houses not exceeding £20.	Annual Rent of Houses not exceeding £30.	Charges for one W.C. for Houses under £10.	REMARKS.
Alfreton Urban Sanitary Authority .....	7½ per cent. 0 7 6	7½ per cent. 0 15 0	* 6⅔ per cent. 1 0 0	7 per cent. 1 8 0	5½ per cent. 1 15 0	Nil.	* Not exceeding £14.
Ashby-de-la-Zouch Rural Sanitary Authority	10½ ,, 0 10 10	8½ ,, 0 17 7	8½ ,, 1 4 4	7½ ,, 1 11 2	6½ ,, 1 17 6	5 6	Water pumped.
Bakewell Urban Sanitary Authority .....	7½ ,, 0 7 11	7½ ,, 0 15 10	7½ ,, 1 3 9	7½ ,, 1 11 8	7½ ,, 2 7 6	Nil.	
Belper Water Company .....	7 ,, 0 7 0	7 ,, 0 14 0	6 ,, 0 18 0	6 ,, 1 4 0	5 ,, 1 10 0	Nil.	
Buxton Urban Sanitary Authority.....	8 ,, † 0 8 0	5 ,, 0 10 0	5 ,, 0 15 0	5 ,, 1 0 0	5 ,, 1 10 0	Nil.	† Not exceeding £8.
Castleton Water Co. .....	5½ ,, 0 8 8	10 ,, 1 0 0	10 ,, 1 10 0	10 ,, 2 0 0	10 ,, 3 0 0	6 0	
Chesterfield Gas and Water Co.....	6 ,, 0 6 0	6½ ,, 0 12 6	6 ,, 0 18 0	6 ,, 1 4 0	5 ,, 1 10 0	Nil.	
Chesterfield Rural Sanitary Authority ... ....	7½ ,, 0 7 6	7 ,, 0 14 0	7½ ,, 1 2 0	6½ ,, 1 6 0	6½ ,, 1 17 0	Nil.	
Clay Cross Water Company .....	11½ ,, 0 11 4	7½ ,, 0 14 8	6 ,, 0 18 0	5½ ,, 1 1 4	... ... ...	...	Water filtered.
Fairfield Urban Sanitary Authority .....	8½ ,, 0 8 8	5½ ,, 0 11 8	5½ ,, 0 17 6	5½ ,, 1 3 4	5½ ,, 1 15 0	Nil.	
Glossop Borough .....	10 ,, ‡ 0 10 0	6 ,, 0 12 0	5½ ,, 0 16 0	5 ,, 1 0 0	4½ ,, 1 5 0	5 0	‡ Not exceeding £9.
Heanor Urban Sanitary Authority.....	8½ ,, 0 8 8	4½ ,, 0 8 8	2½ ,, 0 8 8	2½ ,, 0 8 8	1½ ,, 0 8 8	6 0	Water pumped and filtered.
Ilkeston Borough.....	11 ,, § 0 11 0	6½ ,, 0 13 4	6 ,, 0 18 0	6 ,, 1 4 0	5½ ,, 1 13 0	4 0	§ Not exceeding £7. The water is filtered and partly pumped.
Long Eaton Urban Sanitary Authority.....	2½ ,, 0 2 6	2½ ,, 0 5 0	2½ ,, 0 7 6	2½ ,, 0 10 0	2½ ,, 0 15 0	Nil.	The water is brought 12 miles and is pumped.
Mansfield Rural Sanitary Authority .....	7½ ,, 0 7 6	7½ ,, 0 15 0	7 ,, 1 1 0	6½ ,, 1 6 0	6½ ,, 2 0 0	...	Water pumped.
Matlock Bath Urban Sanitary Authority .....	7½ ,, 0 7 6	7½ ,, 0 15 0	7½ ,, 1 2 6	7½ ,, 1 10 0	6 ,, 1 16 0	Nil.	
North Darley Urban Sanitary Authority .....	8½ ,, 0 8 8	4½ ,, 0 8 8	2½ ,, 0 8 8	2½ ,, 0 8 8	1½ ,, 0 8 8	Nil.	
Wirksworth Urban Sanitary Authority .....	2½ ,, 0 2 6	2½ ,, 0 5 0	2½ ,, 0 7 6	2½ ,, 0 10 0	2½ ,, 0 15 0	Nil.	



TABLE III.]

## COUNTY OF DERBY.

Table of Infectious Sickness during the year 1893 in Thirty-four Sanitary Districts in which the Notification Act was in force.

NAME OF DISTRICT.	Estimated Population.	NEW CASES.						CASES PER 1,000 OF POPULATION.						NO. OF CASES REMOVED TO ISOLATION HOSPITALS.				WHERE ISOLATED.	
		Small Pox.	Scarlatina.	Diphtheria and Membranous Croup.	Typhoid and Continued Fevers.	Puerperal Fever.	Erysipelas.	Small Pox.	Scarlatina.	Diphtheria and Membranous Croup.	Typhoid Fevers.	Puerperal Fever.	Erysipelas.	Cost of Notification act. per 1,000 of Population.	Small Pox.	Scarlatina.	Diphtheria and Membranous Croup.	Typhoid Fever.	
ALFRETON ...	15,700	10	29	7	18	3	19	0·63	1·84	0·44	1·14	0·19	1·21	13·8	...	...	...	...	
ALVASTON & BOULTON ...	3,670	...	5	11	14	...	...	...	1·3	2·9	3·8	...	...	20·5	...	...	...	...	
ASHBOURNE (since April) ...	3,852	...	2	...	14	3	5	...	0·5	...	3·6	0·77	1·2	15·6	...	...	...	...	2
BAKEWELL ...	2,860	26	...	...	2	...	8	9·0	...	...	0·69	...	2·7	31·5	25	...	...	...	
BASLOW & BUNNELL ...	864	...	6	...	...	...	1	...	6·9	...	...	...	1·1	20·3	...	...	...	...	
BELPER ...	10,605	1	7	1	8	...	9	0·09	0·6	0·09	0·7	...	0·8	6·1	1	1	...	...	
BUXTON ...	7,781	11	19	1	1	1	6	1·4	2·4	0·1	0·1	0·12	0·7	12·6	11·3	...	...	...	
CHESTERFIELD (BORO') ...	22,530	96	191	10	29	5	33	4·2	8·4	0·4	1·2	0·22	1·4	40·4	85	...	...	...	
DRONFIELD ...	4,000	6	35	8	1	...	6	1·5	8·7	2·0	0·2	...	1·5	35·0	2	...	...	...	
FAIRFIELD ...	2,103	1	1	...	1	...	3	0·4	0·4	...	0·4	...	1·4	7·1	1	1	...	...	
GLOSSOP (BORO') ...	22,865	6	69	48	48	11	10	0·26	3·0	2·0	2·0	0·48	0·4	20·11	6	...	...	12	
HEANOR ...	10,440	2	24	66	32	1	21	0·19	2·2	6·3	3·0	0·09	2·0	34·11	2	...	...	...	
ILKESTON (BORO') (since April) ...	20,930	1	112	10	90	3	7	0·04	5·3	0·4	4·3	0·14	0·3	26·7	1	5	...	9	
LONG EATON ...	10,630	5	145	7	23	2	24	0·4	13·6	0·6	2·1	0·18	2·2	48·5	...	...	...	...	
NEWBOLD & DUNSTON ...	5,470	176	4	...	3	...	3	32·1	0·7	...	0·5	...	0·5	85·0	112	...	...	...	
NEW MILLS (since October) ...	6,685	1	10	8	1	1	4	0·1	1·4	1·1	0·1	0·1	0·5	9·4	1	...	...	...	
NORTH DARLEY ...	2,270	1	14	3	3	...	...	0·4	6·1	1·3	1·8	...	...	23·1	1	...	...	...	
RIPLEY ...	7,000	3	14	7	3	1	6	0·4	2·0	1·0	0·4	0·1	0·8	12·1	...	...	...	...	
SOUTH DARLEY ...	765	...	...	...	...	...	...	...	...	...	...	...	0·0	0·0	...	...	...	...	
SWADLINCOTE ...	14,326	2	11	6	5	1	9	0·1	0·7	0·4	0·3	0·06	0·6	5·11	2	...	...	...	
WIRKSWORTH ...	3,751	5	15	...	14	...	5	1·3	3·9	...	3·7	...	1·3	25·11	2	...	...	...	
21 URBAN DISTRICTS ...	179,097	353	713	193	310	32	179	1·97	3·98	1·07	1·73	0·17	0·99	24·10	251	8	...	23	
<b>RURAL.</b>																			
ASHBY-DE-LA-ZOUCH ...	7,027	...	27	9	6	1	14	...	8·8	1·2	0·8	0·14	1·9	20·3	...	8	...	...	
BAKEWELL (South) ...	7,880	6	15	3	1	2	5	0·7	1·9	0·3	0·1	0·25	0·63	10·1	1	...	...	...	
Do. (North) ...	10,617	121	12	3	2	3	2	11·3	1·1	0·2	0·18	0·28	0·18	33·8	67	...	...	...	
BASFORD ...	5,614	...	19	39	9	2	5	...	3·3	6·9	1·6	0·35	0·89	82·11	...	...	...	...	
BELPER, A. & B. ...	23,281	3	32	13	10	1	10	0·1	1·3	0·5	0·4	0·04	0·4	7·4	...	...	...	...	
CHAPEL-EN-LE-FRITH ...	14,013	19	71	16	12	3	7	1·3	5·0	1·1	0·8	0·21	0·49	22·10	16	...	...	...	
CHESTERFIELD ...	63,070	178	206	23	91	6	110	2·8	3·2	0·3	1·4	0·09	1·7	24·4	58	...	...	...	
ECCLESALL BIERLOW ...	8,418	222	42	23	15	2	10	26·3	4·9	2·7	1·7	0·23	1·18	93·3	55	...	...	...	
HAYFIELD ...	4,000	2	22	2	2	...	5	0·5	5·4	0·5	0·5	0·6	...	1·2	20·7	2	...	...	
MANSFIELD ...	17,895	16	114	23	114	4	45	0·8	6·3	1·2	6·3	0·22	2·5	44·1	15	...	...	...	
ROTHERHAM ...	2,852	...	11	1	2	1	1	...	2·1	0·3	0·7	0·35	0·3	14·0	0	...	...	...	
SHARDLOW ...	27,219	6	47	23	19	2	18	0·2	1·7	0·8	0·6	0·07	0·6	10·6	6	...	...	...	
TAMWORTH ...	323	...	...	...	...	...	...	...	...	...	...	...	...	0·0	0·0	...	...	...	
WORKSOP ...	7,062	2	24	7	19	1	6	0·2	3·3	0·99	2·6	0·14	0·8	20·10	1	...	...	...	
13 RURAL DISTRICTS ...	199,271	575	642	185	302	28	238	2·88	3·22	0·95	1·52	0·14	1·44	24·8	220	8	Nil.	Nil.	
21 URBAN and 13 RURAL DISTRICTS ...	378,368	928	1,855	378	612	60	417	2·45	3·58	1·01	1·62	0·15	1·1	24·9	471	16	Nil.	23	

Percentage of notified cases removed to Hospital ... ... ... 50·7 1·1 Nil. 8·7









